

FIG. 1

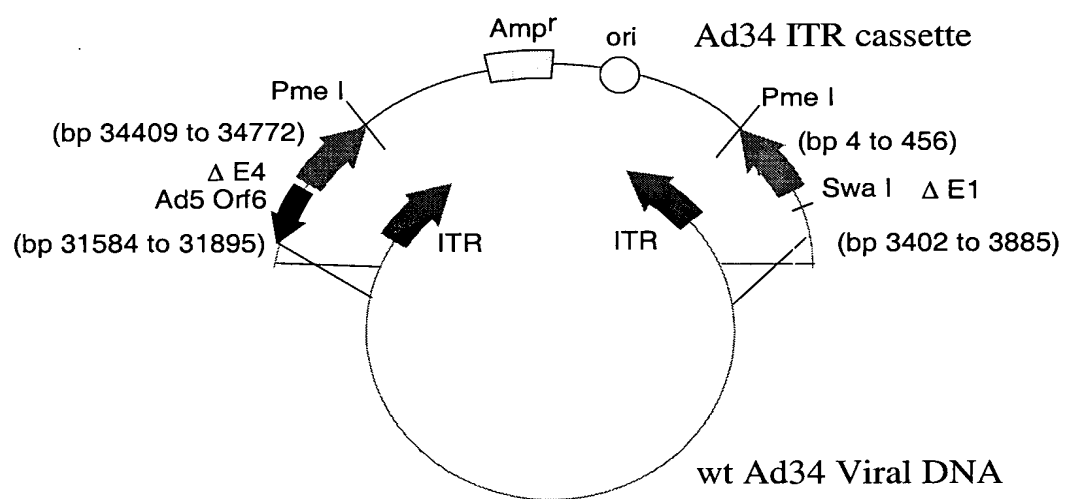


FIG. 2

1	catcatcaat	aatatacctt	atagatggaa	tgggtgccaat	atgtaaatga	ggtgatttta
61	aaaattgtgg	ggtgtgtggt	gattggctgt	gggggttaacg	gctaaacggg	gcggcgcggc
121	cgtgggaaaa	tgacgttttg	tgggggtgga	gttttttttgc	aagttgtcgc	gggaaatgtg
181	acgcataaaa	aggctttttt	tctcacggaa	ctactgactt	ttcccacggg	atttaacagg
241	aaatgaggta	gttttgaccg	gatgcaagtg	aaaattgctg	atttgcgcg	gaaaactgaa
301	tgaggaagtg	tttttctgaa	taatgtggta	tttatggcag	ggtggagtat	ttgttcaggg
361	ccaggtagac	tttgacccat	tacgtggagg	tttcgattac	cgtgtttttt	acctgaattt
421	ccgcgtaccg	tgtcaaagtc	ttctgttttt	acgtagggtg	cagctgatcg	ctacgggtatt
481	tatacctcag	ggtttgtgtc	aagaggccac	tcttgagtgc	cagcgagaag	agttttctcc
541	tctgcgccgg	cagtttaata	ataaaaaaat	gagagatttg	cgatttctgc	ctcaggaaat
601	aattttctgct	gagactggaa	atgaaatact	ggagcttgtg	gtgcacgccc	tgatgggaga
661	cgatccggag	ccacctgtgc	agctttttga	gcccctacg	cttcagggaac	tgatgatatt
721	agaggtagag	ggatcggagg	attctaata	ggaagctgtg	aatggctttt	ttaccgattc
781	tatgctttta	gctgctaata	aaggattaga	attagatccg	cctttggaca	ctttcgatac
841	tccaggggtg	attgtggaaa	gcggtacagg	tgtaagaaaa	ttacctgatt	tgggttccgt
901	ggactgtgat	ttgcaactgt	atgaagacgg	gtttcctccg	agtgatgagg	aggaccatga
961	aaaggagcag	tctatgcaga	ctgcacgggg	tgaggggagt	aaggctgcca	gtgttggttt
1021	tcagttggat	tgcccggagc	ttcctggaca	tggctgtaag	tcttgtgaat	ttcacaggaa
1081	aaatactgga	gtaaaggaac	tgttatgttc	gctttgttat	atgagagcgc	actgccactt
1141	tattttacagt	aagtgtgttt	aagttaaaa	tttaaaggaat	atgctgtttt	tcacatgtat
1201	attgagtggg	agttttgtgc	ttcttattat	aggtcctgtg	tctgtgctg	atagtcacc
1261	atctcctgat	tctactacct	cacctcctga	gattcaagca	cctgttctcg	tggacgtgcg
1321	caagcccatt	cctgtgaagc	ttaagcctgg	gaaacgtcca	gcagtggaaa	aacttgaggga
1381	cttgttacag	ggtggggacg	gacctttgga	cttgagtaca	cggaaacggc	caagacaata
1441	agtgttccat	atccgtgttt	acttaaggtg	acgtcaatat	ttgtgtgaga	gtgcaatgta
1501	ataaaaaatat	gttaactgtt	cactggtttt	tattgctttt	tgggcgggga	ctcaggtata
1561	taagtagaag	cagacctgta	tggttagctc	ataggagctg	gctttcatcc	atggagggtt
1621	gggccatttt	ggaagacctt	agaaagacta	ggcaactgtt	agaggacgct	tcggacggag
1681	tctccggttt	ttggagattc	tggttcgcta	gtgaattagc	tagggtagtt	tttaggataa
1741	aacaggacta	taaagaagaa	tttgaaaagt	tggttgtaga	ttgcccagga	ctttttgaag
1801	ctcttaattt	gggccatcaa	gttcacttta	aagaaaaagt	tttatcagtt	ttagactttt
1861	caaccccagg	tagaactgcc	gctgctgtgg	cttttcttac	ttttatatta	gataaatgga
1921	tcccgacagc	tcatttccagc	aggggatacg	ttttggattt	cgtagccaca	gcatttgtga
1981	gaacatggaa	ggttcgcaag	atgaggacaa	tcttaggtta	ctggccagtg	cagcctttgg
2041	gtgtagcggg	aatcctgagg	catccaccgg	tcatgccagc	ggttctggag	gaggaacagc
2101	aagaggacaa	cccagagacc	ggcctggacc	ctccagtggg	ggaggcggag	tagctgactt
2161	gtctcctgaa	ctgcaacggg	tgttactggt	atctacgtcc	actggacggg	ataggggctg
2221	taagagggag	agggcatcta	gtggtactga	tgctagatct	gagttggctt	taagttaaat
2281	gagtcgcaga	cgtcctgaaa	ccatttgggt	cgatgaggtc	cagaaagagg	gaggggatga
2341	agtttctgta	ttgcaggaga	aatattcact	ggaacagggt	aaaacatgtt	ggttggagcc
2401	tgaggatgat	tgggaggtgg	ccattaaaaa	ttatgccaa	atagctttga	ggcctgataa
2461	acagtataag	attactagac	ggattaatat	ccggaatgct	tgttacatat	ctggaaatgg
2521	ggctgaggtg	gtaatagata	ctcaagacaa	ggcagttatt	agatgctgca	tgatggatat
2581	gtggcctgga	gtagtcggta	tggaaagcgt	aacttttgta	aatgtttaagt	ttaggggaga
2641	tggttataat	ggaatagtgt	ttatggccaa	taccaaactt	atattgcatg	ggttagctt
2701	ttttgggttt	aacaatacct	gtgtagatgc	ctggggacag	gttagtgtac	ggggatgtag
2761	tttctatgcg	tgttggattg	ccacagctgg	cagaaccaag	agtcaattgt	ctctgaagaa
2821	atgcatattc	caaagatgta	acctgggcat	tctgaatgaa	ggcgaagcaa	gggtccgcca
2881	ctgcgcttct	acagatactg	gatgttttat	tttaattaag	ggcaatgcca	gcgtaaagca
2941	taacatgatt	tgcggtgctt	ccgatgagag	gccttatcaa	atgctcactt	gtgccggtgg
3001	gcattgtaat	atgctggcta	ctgtgcatat	tgtttcccat	caacgcaaaa	aatggcctgt
3061	ttttgatcac	aatgtgttga	ccaagtgtac	catgcatgca	ggtgggcgta	gaggaatgtt
3121	tattgccttac	cagtgttaaca	tgaatcatgt	gaaagtgttg	ttggaaccag	atgccttttc
3181	cagaatgagc	ctaacaggaa	tctttgacat	gaacatgcaa	atctggaaga	tcttgaggta
3241	tgatgatacg	agatcgaggg	tgcgcgcgat	cgaatgcgga	ggcaagcatg	ccaggttcca
3301	gccggtgtgt	gtagatgtga	ctgaagatct	gagaccggat	catttgggtta	ttgcccgcac
3361	tggagcagag	ttcggatcca	gtggagaaga	aactgactaa	ggtgagtatt	gggaaaactt
3421	ggggtggggt	tttcagatgg	acagatgtag	taaaaatttg	tttttctgt	ctttcagctg
3481	tcatgagtgg	aaacgcttct	tttaaggggg	gagtccttcag	cccttatctg	acagggcgct
3541	tcccatcctg	ggcaggagtt	cgtcagaatg	ttatgggatc	tactgtggat	ggaagaccgc
3601	tccaaccgcg	caattcttca	acgctgacct	atgctacttt	aagttcttca	cctttggacg
3661	cagctgcagc	cgccgcgcgc	gcctctgttg	ccgctaacac	tggtcttggg	atgggttact
3721	atgggaagtat	cgtgggcta	tccacttctc	ctaataaccc	ttctaccctg	actcaggaca
3781	agttacttgt	ccttttggcc	cagctggagg	ctttgaccca	acgtctgggt	gaactttatc
3841	agcaggtggc	cgagttgcga	gtacaaaactg	agtctgctgt	cggcacggca	aagtctaaat

FIG. 3A-1

3901	aaaaaaaaat	tccacaatca	atgaataaat	aaacgagctt	gttggtgatt	taaaatcaag
3961	tgttttttatt	tcattttttcg	cgcacgggtat	gccctagacc	accgatctcg	atcatttgaga
4021	acacgggtgga	ttttttccag	aatcctatag	aggtgggatt	gaatgttttag	atacatgggc
4081	attaggccat	cttttggggtg	gagatagctc	cattgaagggt	attcatgctc	cggggtagtg
4141	ttgtaaataca	cccagtcata	acaaggctgc	agtgcattggt	gttgcaaat	atcttttaga
4201	agtaggctga	ttgccacaga	taagcccttg	gtgtagggtgt	ttacaaaccg	gttgagctgg
4261	gaggggtgca	ttcggggtga	aattatgtgc	attttggatt	ggatttttta	gttggaata
4321	ttgccgccaa	gatctcgtct	tgggttcattg	ttatgaagga	ccaccaagac	ggtgatccg
4381	gtacattttag	gaaattttatc	gtgtagcttg	gatggaaaag	cgtggaaaaa	tttgagaca
4441	cccttgtgtc	ctccgagatt	ttccatgcac	tcattccatga	taatagcaat	ggggccgtgg
4501	gcagcagcgc	gggcaaacac	gttcctgtggg	tctgacacat	catagtattg	ttcctgagtt
4561	aaatcatcat	aagccattttt	aatgaatttg	gggcggagag	tacccgattg	gggtatgaat
4621	gttccttcgg	gccccggagc	atagttcccc	tcacagattt	gcatttccca	agctttcagt
4681	tccgatgggtg	gaatcatgtc	cacctggggg	gctatgaaga	acaccgtttc	tggggcgggg
4741	gtgattagtt	gggatgatag	caagtttctg	agcaattgag	atttgccaca	tccggtgggg
4801	ccataaatga	ttccgattac	aggttgcagg	tggtagttta	gggaacggca	actgcgtct
4861	tctcgaagca	agggggccac	ctcgttcac	atttccctta	catgcatatt	ttcccgacc
4921	aaatccatta	ggaggcgcgc	tcctcctagt	gatagaagtt	cttgtagtga	ggaaaagt
4981	ttcagcgggt	ttagaccgtc	agccatgggc	attttggaga	gagtttgctg	caaaagtct
5041	agtctgttcc	acagttcagt	gatgtgttct	atggcatctc	gatcccgag	actcctcgt
5101	ttcgcggggt	tggacggctc	ctggagttag	gtatgagacg	atgggcgtcc	agcgtgcca
5161	gggttcgggtc	cttccagggt	ctcagtgttc	gagtcagggt	tgtttccgtc	acagtgaagg
5221	ggtgtgcgcc	tgcttggggc	cttgccagg	tgcgcttcag	actcattctg	ctggtggaga
5281	acttctgtcg	cttggcgccc	tgtatgtcgg	ccaagtagca	gtttaccatg	agttcgtagt
5341	tgagcgccct	ggctgcgtgg	cctttggcgc	ggagcttacc	tttggaagtt	ttcttgata
5401	ccgggcagta	taggcatttc	agcgcataca	gcttgggcgc	aaggaaaatg	gattctgggg
5461	agtatgcac	tgcgccgcag	gaggcgcaaa	cagtttcaca	ttccaccagc	caggttaaat
5521	ccggttcatt	ggggtcaaaa	acaagtttct	cgccatattt	tttgatgcgt	ttcttacctt
5581	tggctctccat	gagttcgtgt	cctcggttag	tgacaaaacag	gctgtccgta	tccccgtaga
5641	ctgattttac	aggcctcttc	tccagtggag	tgccctcggtc	ttcttcgtac	aggaactctg
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5761	agcgatcggt	gtcaaccagg	gggtccacct	tttccaaagt	atgcaaacac	atgtcaccct
5821	cttcaacatc	caggaatgtg	attggcttgt	aggtgtattt	cacgtgacct	ggggtccccg
5881	cttgggggggt	ataaaaagggg	gcggttcttt	gctcttcttc	actgtcttcc	ggatcgctgt
5941	ccagggaacgt	cagctgttgg	ggtaggtatt	ccctctcgaa	ggcgggcatg	acctctgcac
6001	tcagggttgct	agtttctaa	aacgaggagg	atttgatatt	gacagtgccg	gttgagatgc
6061	ctttcatgag	gttttctgctc	atttggctag	aaaacacaa	ttttttattg	tcaagtttgg
6121	tggcaaatga	tccatacagg	gcgttggata	aaagtttggc	aatggatcgc	atggtttggt
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6301	ctcgattatg	caaggtaatt	aaatccacac	tgggtggccac	ctcgctcga	aggggttcgt
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6421	gttctatcggg	aggggtctgca	tccattgtaa	agattccccg	aagtaaaatc	ttatcaaaat
6481	agctgatggg	agtggggtca	tctaaggcca	tttgccattc	tcgagctgcc	agtgcacgct
6541	catatgggtt	aaggggactg	ccccagggca	tgggatgggt	gagtgcagag	gcatacatgc
6601	cacagatgtc	atagacgtag	atgggatcct	caaagatgcc	tatataggtt	ggatagcatc
6661	gccccctct	gatacttgct	cgcacatagt	catatagtcc	atgtgatggc	gtagcaacc
6721	ccggacccaa	gttgggtgca	ttgggttttt	ctgttctgta	gacaatctgg	cgaagatgg
6781	cgtgagaatt	ggaagagatg	gtgggtcttt	gaaaaatgtt	gaaatgggca	tgaggtagac
6841	ctacagagtc	tctgacaaag	tgggcataag	attccttgaag	cttgggttacc	agttcggcgg
6901	tgacaagtac	gtctagggcg	cagtagtcaa	gtgtttcttg	aatgatgtca	taacctgggt
6961	ggtttttctt	ttcccacagt	tcgcggttga	gaaggatttc	ttcgcgatcc	ttccagtact
7021	cttctagcgg	aaacccgtct	ttgtctgcac	ggtaagatcc	tagcatgtag	aactgattaa
7081	ctgccttgta	agggcagcag	cccttctcta	cgggtagaga	gtatgcttga	gcagcttttc
7141	gcagcgaagc	gtgagtaagg	gcgaagggtg	ctctgacct	gacttttgaga	aattgggtatt
7201	tgaagtcacg	gtcgtcacag	gctccctgtt	cccagagtgg	gaagtctacc	cgtttcttgt
7261	agggcggggt	gggcaaagcg	aaagtaacat	cggtgaagag	aatcttaccg	gctctgggca
7321	taaaattgctg	agtgatgcgg	aaaggctgtg	gtacttccgc	tcgattgttg	atcacctggg
7381	cagctaggac	gatctcgtcg	aaaccgttga	tgttgtgtcc	tacgatgtat	aattctatga
7441	aacgcggcgt	gcctttgacg	tgaggtagct	tattgagctc	atcaaagggt	aggtctgtag
7501	ggtcagataa	ggcgtagtgt	tcgagagccc	attcgtgcag	gtgaggattt	gcatgtagga
7561	atgatgacca	aagatccacc	gccagtgtcg	tttgtaactg	gtcccgcatac	tgacgaaaat
7621	gctggccaat	tgccattttt	tctggagtga	cacagtagaa	ggttctgggg	tcttgttgcc
7681	atcgatccca	cttttagttta	atggctagat	cgtgggccat	gttgacgaga	cgctcttctc
7741	ctgagagttt	catgaccagc	atgaaaggaa	ctagttgttt	gccaaggac	cccatccagg

FIG. 3A-2

7801	tgtaagtttc	cacatcgtag	gtcaggaaga	gtctttctgt	gcgaggatga	gagccgatcg
7861	ggaagaactg	gatttcctgc	caccagttgg	aggattggct	gttgatgta	tggaagtaga
7921	agttttctgcg	gcgcgccgag	cattcgtgtt	tgtgcttgta	cagacggccc	cagtagtcgc
7981	agcgttgac	gggttgatc	tctggaatga	gctgtacctg	gcttcccttg	acgagaaatt
8041	tcagtgaggaa	gccgaggcct	ggcgattgta	tctcgtgctc	ttctatatc	gctgtatcgg
8101	cctgttcac	ttctgtttcg	gtggtggtea	tgctgacgag	cccccgcg	aggcaagtcc
8161	agacctcg	gcgggagggg	cggagctgaa	ggaccagagc	gcgcaggctg	gagctgtcca
8221	gagtcctgag	acgctgcgga	ctcagggttag	taggtagggg	cagaagatta	acttgcatga
8281	tcttttccag	ggcgtgcggg	aggttcagat	ggtacttgat	ttccacaggt	tcgttttag
8341	agatgtcaat	ggcttgacgg	gttcctgtgc	ctttggcg	cactaccgta	cctttgtttt
8401	ttcttttgat	cggtggtggc	tctcttgctt	cttgcatgct	cagaagcgat	gacggggacg
8461	cgcccgggc	ggaagcggtt	gttcgggacc	cggaggcatg	gctggtagtg	gcacgtcggc
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8581	tcgattgacg	tcttgatctc	gacgtctctg	ggtgaaagct	accggccccc	tgagcttgaa
8641	cctgaaagag	agttcaacag	aatcaatttc	ggtatcgta	acggcagctt	gtctcagtat
8701	ttcttgtagc	tcaccagagt	tgcttcggta	ggcgatctcc	gccatgaact	gctcgatttc
8761	ttctctctga	agatctccgc	gacctcctct	ctcgacgggtg	gccgcgaggt	cattggagat
8821	acggcccatg	agttgggaga	atgcagtcac	gcccgcctcg	ttccagacgc	ggctgtaaac
8881	cacggccccc	tcggagtctc	ttgcgcgcac	caccacctga	gcgagggttaa	gctccacgtg
8941	tctggtgaag	accgatag	tgcataggcg	tgtaaaaagg	tagttgagtg	tggtggcaat
9001	gtgttcggcg	acgaagaaat	acatgatcca	tcgtctcagc	ggcatttcgc	tgacatcgcc
9061	cagagcttcc	aagcgtccca	tggcctcgta	gaagtccacg	gcaaaattaa	aaaactggga
9121	gtttcgcgcg	gacacgggtca	attcctcctc	gagaagacgg	atgagttcgg	ctatggtggc
9181	ccgtacttcg	cgttcgaagg	ctcccgggat	ctcttcttcc	tcttctatct	cttcttccac
9241	taacatctct	tcttcgtctt	caggcggggg	cggagggggc	acacggcgac	gtcgcggcg
9301	cacgggcaaa	cggtcgatga	atcggtcaat	gacctctccg	cggcgcgggc	gcatggtttc
9361	agtgcaggcg	cggccgttct	cgcgcggtcg	cagagtaaaa	acaccgccc	gcatctcctt
9421	aaagtgggta	ctgggagggt	ctccgtttgg	gagggagagg	gcgctgatta	tacattttat
9481	taattggccc	gtagggactg	cgcgcacaga	tctgatcggtg	tcaagatcca	cgggacttga
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9601	ttgtggcgcg	gggtggttat	gtgttcggtc	tgggtcttct	gtttcttctt	catctcggga
9661	aggtgagacg	atgctgctgg	tgatgaaatt	aaagtaggca	gttctaagac	ggcggatggt
9721	ggcaggagc	accaggtctt	tgggtccggc	ttgctggata	cgcaggcgat	tggccattcc
9781	ccaagcatta	tcctgacatc	tagcaagatc	tttgtagtag	tcttgcatga	gccgttctac
9841	gggcacttct	tcctcaccgc	ttctgccatg	catacgtgtg	agtccaaacc	cgcgcatagg
9901	ttgtaccagt	gccaagtcag	ctacgactct	ttcggcgagg	atggcttgct	gtacttgggt
9961	gaggggtggct	tgaaagtcac	caaaatccac	aaagcgggtg	taagccccgg	tattaatggt
10021	gtgaagcacag	ttggccatga	ctgaccagtt	aactgtctgg	tgaccagggc	gcacgagctc
10081	ggtgtatttta	aggcgcgaa	aggcgcggtt	gtcaaagatg	taatcgttgc	aggtgcgcac
10141	cagatactgg	taacctataa	gaaaatgcgg	cgggtggttgg	cggtagagag	gccatcggtc
10201	tgtagctgga	gcgcgggggg	cgaggtcttc	caacataagg	cgggtgatagc	cgtagatgta
10261	cctggacatc	cagggtgatc	ctcgggcggt	agtagaagcc	cgaggaaact	cgcgtacgcg
10321	tttccaaatg	ttgcgtagcg	gcataagata	gttcattgta	ggcaccggtt	gccacgtgag
10381	gcgcgcgcag	tcattgatgc	tctatagaca	cggagaaaaa	gaaagcggtc	agcgactcga
10441	ctccgtagcc	tggaggaacg	tgaacgggtt	gggtcgcggg	gtaccccggt	tcgagacttg
10501	tactcgagcc	ggccggagcc	gcggctaacc	tggtattggc	actcccgtct	cgaccagcc
10561	tacaaaaatc	caggatacgg	aatcgagtcg	ttttgctggt	tgccgaatgg	cagggaaagt
10621	agtcctatct	tttttttttg	ccgctcagat	gcatcccgtg	ctgcgacaga	tgcgtcccca
10681	acaacagccc	ccctcgcagc	agcagcaacc	acaaaaggct	gtccctgcaa	ctactgcaac
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10801	actggcacgt	ctaggtgcgc	cttcgcccga	gcggcatccg	cgagttcaac	tgaaaaaaga
10861	ttctcgcgag	gcgtatgtgc	cccaacagaa	cctattttaga	gacagacgcg	gcgaggagcc
10921	ggaggagatg	cgagcttccc	gctttaacgc	gggtcgtgag	ctgcgtcacg	gtttggacag
10981	aagacgagtg	ttgcgggacg	aggatttcga	agttgatgaa	gtgacaggga	tcagtcctgc
11041	cagggcacac	gtggctgcag	ccaaccttgt	atcggcttac	gaacagacag	taaagggaaga
11101	gcgtaatttc	caaaagtctt	ttaataatca	tgtgcgaacc	ctcattgccc	gcgaagaagt
11161	cacccttggt	ttgatgcatt	tgtgggattt	gatggaaagc	atcattcaga	accctactag
11221	caaacctctg	accgcacagc	tgtttctggt	ggtgcaaac	agcagagaca	atgaggcttt
11281	cagagaggcg	ctgctcaaca	tcaccgaacc	cagggggaga	tggttgtag	atcttatcaa
11341	cattctacag	agtatcatag	tgcaggagcg	gagcctgggc	ctggccgaga	aggtggctgc
11401	catcaattac	tcggttttga	gcttgggaaa	gtattacgct	cgcaagatct	acaagactcc
11461	atacgttccc	atagacaagg	aggtgaagat	agatgggttc	tacatgcgca	tgacgtgaa
11521	ggtgttgacc	ctgagcgatg	atcttggggg	gtaccgcaat	gacagaatgc	atcgcgcggt
11581	gagcgccagc	aggaggcgcg	agttaagcga	cagggaaact	atgcacagtt	tgcaagagc
11641	tctaactgga	gctggaaccg	agggtgagaa	ttactttgat	atgggagctg	acttgacgtg

FIG. 3A-3

11701	gcagcctagt	cgcaggggctc	tgaacgcgcg	gacggcagga	tgtgagcttc	cttacataga
11761	agaggcggat	gaaggcgagg	aggaagaggg	cgagtacttg	gaagactgat	ggcacaaacc
11821	gtgttttttg	ctagatggaa	cagcaagcac	cggatcccg	aatgcggcg	gcgctgcaga
11881	gccagccgtc	cggcattaac	tcctcggacg	attggaccca	ggccatgcaa	cgtatcatgg
11941	cgttgacgac	tcgcaacccc	gaagccttta	gacagcaacc	ccaggccaac	cgtctatcgg
12001	ccatcatgga	agctgtagtg	ccttcccgt	ctaattccac	tcatgagaag	gtcctggcca
12061	tcgtgaacgc	gttggtggag	aacaaagcta	ttcgtccaga	tgaggccgga	ctggtatata
12121	acgtctctct	agaacgcgtg	gctcgtaca	acagtagcaa	tgtgcaaacc	aatttggacc
12181	gtatgataac	agatgtacgc	gaagccgtgt	ctcagcgcga	aaggttccag	cgcatgcca
12241	acctgggttc	gctgggtggc	ttaaatgctt	tcttgagtac	tcagcctgct	aatgtgccgc
12301	gtggtcaaca	ggattatact	aactttttaa	tgcttttgag	actgatggta	tcagaagtac
12361	ctcagagcga	agtatatcag	tcgggtcctg	attacttctt	tcagactagc	agacagggct
12421	tgcagacggt	aaatctgagc	caagctttta	aaaaccttaa	aggtttgtgg	ggagtgcattg
12481	ccccggtagg	agaaagagca	accgtgtcta	gcttggttaac	tccgaactcc	cgctatttat
12541	tactgttggt	agctcctttc	accgacagcg	gtagcatcga	ccgtaattcc	tatttggggt
12601	acctactaaa	cctgtatcgc	gaagccatag	ggcaaaagtca	ggtggacgag	cagactatc
12661	aagaaattac	ccaagtcagt	cgcgcttttg	gacaggaaga	caactggcagt	ttggaagcca
12721	ctctgaactt	cttgcttacc	aatcgggtctc	aaaagatccc	tcctcaatat	gctcttactg
12781	cgaggaggga	gaggatcctt	agatatgtgc	agcagagcgt	gggattgttt	cttagtcaag
12841	agggggcaac	tcggactgca	gcactggaca	tgacagcgcg	aaatatggag	ccagcatgt
12901	atgccagtaa	ccgacctttc	attaacaaac	tgctggacta	cttgacacaga	gctgccgcta
12961	tgaactctga	ttattttcacc	aatgccatct	taaaccgcga	ctggctgccc	ccacctgggt
13021	tctacacggg	cgaatatgac	atgcccgcac	ctaattgacgg	atttctgtgg	gacgacgtgg
13081	acagcgatgt	tttttcacct	tttctgtatc	atcgcacgtg	gaaaaaggaa	ggcggcgata
13141	gaatgcattc	ttctgcatcg	ctgtccgggg	tcattgggtgc	taccgcggct	tagccccgagt
13201	ctgcaagtcc	ttttcctagt	ctaccttttt	ctctacacag	tgtacgtagc	agcgaagtgg
13261	gtagaataag	tcgcccaggt	ttaatgggcg	aagaggagta	cctaaacgat	tccttgctca
13321	gaccggcaag	agaaaaaat	ttcccaaaca	atggaataga	aagtttggtg	gataaaatga
13381	gtagatggaa	gacttatgct	caggatcaca	gagacgagcc	tgggatcatg	ggactacaa
13441	gtagagcgag	ccgtagacgc	cagcgccatg	acagacagag	gggtcttgtg	tgggacgatg
13501	aggattcggc	cgatgatagc	agcgtatttg	acttgggtgg	gagaggaagg	ggcaaccctg
13561	ttgctcattt	gcgccttcgc	ttgggtggta	tgttgtaaaa	aaaaataaaa	aagaaaaaac
13621	tcaccaaggc	catggcgacg	agcgtacggt	cgttcttctt	tattatctgt	gtctagtata
13681	atgaggcgag	tcgtgctagg	cggagcgggtg	gtgtatccgg	agggctctcc	tccttcgtac
13741	gagagcgtag	tgacgacgca	gcaggcgacg	gcgggtgatgc	aatccccact	ggaggctccc
13801	tttgtgcctc	cgcgatacct	ggcacctacg	gagggcgaga	acagcattcg	ttactcggaa
13861	ctggcacctc	agtacgatac	agtcagggtg	tatctgggtg	acaacaagtc	ggcggacatt
13921	gcttctctga	actatcagaa	tgaccacagc	aacttcttga	ccacgggtgt	gcaaaacaat
13981	gactttaccc	ctacggaagc	cagcaccacg	accattaact	ttgatgaacg	atcgcggtgg
14041	ggcggtcagc	taaaaaccat	catgcatact	aacatgcccc	acgtgaacga	gtatatgttt
14101	agtaaacagt	tcaaagcgcg	tgtgatgggtg	tccagaaaaa	ctcctgaggg	tgttagagta
14161	gacgataaatt	atgatcataa	gcaagatatt	ctaaaatacg	agtggttcga	gttacttttg
14221	ccagaaggca	acttttcgggt	cactatgact	atcgacttga	tgaacaatgc	catcatagac
14281	aattacttga	aagtgggcag	acagaatgga	gtgttggaag	gtgacattgg	tgtaagtctc
14341	gacactagga	acttcaagtt	gggatgggat	ccagaaacta	agttgatcat	gcctgggggt
14401	tacacctatg	aggccttcca	tcctgacatc	gtattgtctg	ctggctgcgg	agtggacttt
14461	accgaaagcc	gtctgagcaa	ccttcttggc	attagaaaga	aacacccatt	ccaagagggt
14521	tttaagatct	tgtatgagga	tttagaagga	ggaaatatct	cagccctttt	ggatgtagat
14581	gcttatgaga	acagcaagaa	agatcaaaaa	gccaaaatag	aagctgctgc	agaagctaaa
14641	gcaaacatag	ttgccaacga	tccggtaagg	gtggctaacg	ctagtgaat	caggggagac
14701	agttttgccg	caacatccgt	tccgactaaa	gaatcattat	tggatgatgt	gtctcaaaac
14761	atagagttaa	aactcactat	taagcctgtg	gaaaaagatg	gcaaaaaacg	aagttacaat
14821	gtgttggaag	ataaaatcaa	cacggcctat	cgcagttggt	acctttcgta	caattatggc
14881	gaccccgaaa	aaggagtgcg	ttcctggaca	ttgctcacca	cctcagatgt	cacctgcgga
14941	gcggagcagg	tctactggtc	gcttccagac	atgatgcagg	atcctgtcac	tttccgctcc
15001	actagacaag	tcagtaacta	ccctgtgggtg	ggtgcagagc	ttatgcccgt	cttttcaaag
15061	agcttctaca	acgaacaagc	tgtgtactcc	cagcagctcc	gccagtccac	ctcgcttacg
15121	cacgtcttca	accgctttcc	tgagaaccag	attttaatcc	gtccgcgggc	gcccacaatt
15181	accacgctca	gtgaaaacgt	tcctgtctct	acagatcacg	ggaccctgac	gttgccgacg
15241	agtatccggg	gagtccaacg	tgtgaccgtt	actgacgcca	gacgcccgc	ctgtccctac
15301	gtgtacaagg	cactgggcat	agtcgcaccg	cgcgtccttt	caagccgcac	tttctaaaaa
15361	aaaaaaaaaa	atgtccggtt	ttatctcgcc	cagtaataac	accggttggg	gtctgcgcgc
15421	tcccagcaag	atgtacggag	gcgcacgcaa	acgttctacc	caacatcccg	tgctgtgttcg
15481	cgggcatctt	cgcgctccat	gggtgcccct	caaggccgcg	actcgcgttc	gaaccaccgt
15541	cgatgatgta	atcgatcagg	tggttgccga	cgcccgtaat	tatactccta	ctgcgcctac

FIG. 3A-4

15601	atctactgtg	gacgcagtta	ttgacagtgt	agtggctgac	gctcgcaact	atgctcgacg
15661	taagagccgg	cgaaggcgca	ttgccagacg	tcaccgagct	accactgcca	tgcgagcagc
15721	aagagctctg	ctacgaagag	ctagacgcgt	ggggcggaaga	gccatgctta	ggggcgccag
15781	acgtgcagct	tcggggcgcca	gcgccggcag	gtcccgcagg	caagcagccg	ctgtcgcagc
15841	ggcgactatt	gccgacatgg	cccaatcgcg	aagaggcaat	gtatactggg	tgcgtagcgc
15901	tgccaccggg	caacgtgtac	ccgtgcgcac	ccgtccccct	cgcaactaga	agatactgag
15961	cagtctccga	tggtgtgtcc	cagcggcgag	gatgtccaag	cgcaaataca	aggaagaaat
16021	gctgcaggtt	atcgcacctg	aagtctacgg	ccaaccgttg	aaggatgaaa	aaaaaccccg
16081	caaaatcaag	cgggtaaaaa	aggacaaaaa	agaagaggaa	gatggcgatg	atgggctggc
16141	ggagtttgtg	cgcgagtttg	ccccacggcg	acgcgtgcaa	tggcgtgggc	gcaaagtctg
16201	acatgtgttg	agacctggaa	cttcgggtgg	ctttacaccc	ggcgagcggt	caagcgctac
16261	ttttaagcgt	tcctatgatg	agggtgtacg	ggatgatgat	attcttgagc	aggcagctga
16321	ccgattaggg	gagtttgctt	atggcaagcg	tagtagaata	aatcccaagg	atgaaacagt
16381	gtccataccc	ttggatcatg	gaaatcccac	ccctagtctt	aaaccgggtca	ctttgcagca
16441	agtgttacc	gtaactccgc	gaacaggtgt	taaacgcgaa	ggtgaagatt	tgtatcccac
16501	tatgcaactg	atgggtgccc	aacgcgcgaa	gttggaggac	gttttgagga	agtaaaaagt
16561	ggatccagat	attcaacctg	agggttaaagt	gagacccatt	aagcaggtag	cgcttggtct
16621	gggagtacaa	actgtagaca	ttaaaattcc	cactgaaagt	atggaagtgc	aaactgaacc
16681	cgcaaagcct	actgccacct	ccactgaagt	gcaaacggac	ccatggatgc	ccatgcctat
16741	tacaactgac	gccgtcggtc	ctttgcagac	atcccgcga	aagtacggtc	catgaagtct
16801	gttgatgccc	aactatgtcg	tacacccatc	tattattcct	actcctggtt	accgaggcac
16861	tcgctactat	cgcagccgaa	acagtacttc	ccgcgcgtcg	cgcaagacac	ctgcaaatcg
16921	cagtcgtcgc	cgtagacgca	caagcaaac	gattcccggc	gccctggtgc	ggcaagtgtg
16981	ccgcaatggg	agtgcggaac	ctttgcacac	gccgcgtgcg	cgttaccatc	ctagtatcat
17041	cacttaataca	atggtgcccgc	tgccctcctt	cagatatggc	cctcacttgt	cgcttcgcgc
17101	ttcccatcac	tggttaccga	ggaagaaact	cgcgccgtag	aagagggatg	ttggggcgcg
17161	gaatgcgacg	ctacaggcga	cggcgtgcta	tccgcgaagca	attgcggggg	ggttttttgc
17221	cagccttaat	tcgaattatc	gctgtctgca	ttggcgcaat	accaggcata	gcttcctgtg
17281	cggttcaggc	ctcgcaacga	cattgacatt	ggaaaaaaaa	aaaacgtata	aataaaaaat
17341	acaatggact	ctgacactcc	tggtactgtg	actatgtttt	cttagagatg	gaagacatca
17401	atttttcatc	cttggctccg	cgacacggca	cgaagccgta	catgggcacc	tggagcgaca
17461	tcggcacgag	ccaactgaac	ggggggcgct	tcaattggag	cagtatctgg	agcgggctta
17521	aaaatttttg	ctcaaccata	aaaacatacg	ggaaacaaagc	tggaacacgc	agtacaggac
17581	aggcgcttag	aaataaactt	aaagaccaga	acttccaaca	aaaagtagtc	gatgggatag
17641	cttccgggat	caatggagtg	gtagatttgg	ctaaccaggc	tgtgcagaaa	aagataaaca
17701	gtcgttttga	cccgcgcgca	gcaaccccg	gtgaaatgca	agtggaggaa	gaaattcctc
17761	cgccagaaaa	acgaggcgac	aagcgtccgc	gtcccgatgt	ggaagagacg	ctggtagcgc
17821	gcgtagatga	accgccttct	tatgaggaag	caacgaagct	tggaatgccc	accactagac
17881	cgatagcccc	tatggccacc	ggggtgatga	aaccttctca	gttgcatcga	cccgtcacct
17941	tggattttgcc	ccctcctcct	gctgctactg	ctgtaccgcc	ttctaagcct	gtcgctgccc
18001	ggaaacctag	cgccgtagcc	aggctcacgc	ccggggggcg	tcctcgctca	aatgcacact
18061	ggcaaaaatac	tctgaacagc	atcgtgggtc	taggcgtgca	aagtgtaaaa	cgccgtcgct
18121	gctttttaatt	aaatatggag	tagcgcttaa	cttgccctatc	tgtgtatatg	tgtcattaca
18181	cgccgtcaca	gcatcagagg	aaaaaaggaa	gaggtcgtgc	gtcgacgctg	agttactttc
18241	aagatggcca	ccccatcgat	gctgccccaa	tgggcataca	tgcacatcgc	cggacaggat
18301	gcttcggagt	acctgagtc	gggtcgtggg	cagttcgccc	gcgccacaga	cacctacttc
18361	aatctgggaa	ataagtttag	aaatcctacc	gtagcgccga	cccacgatgt	gaccaccgat
18421	cgtagccagc	ggctcatggt	gcgcttcgtg	cccgttgacc	gggaggacaa	tacatactct
18481	tacaaagtgc	ggtacaccct	ggcgtggggc	gacaacagag	tgctggatat	ggccagcacg
18541	ttctttgaca	ttagggcgct	gttgacaga	ggctccagtt	ttaaacccta	ttctggtagc
18601	gcttacaact	ccctggctcc	taaaggcgct	ccaaatgcat	ctcagtgggt	ggataaggga
18661	gttacaagca	ctggcctagt	ggacgacggc	aatactgatg	atggggaaga	agccaaaaaa
18721	gcaacatata	cttttggttaa	tgctccagta	aaagccgagg	ctgaaatcac	aaaagacgga
18781	ttgcgggtgg	gcttggaagt	ttcaactgaa	ggtcctaacc	caatctatgc	tgataagctt
18841	tatagccag	aacctcaagt	gggagacgaa	acttggaactg	acctagacgg	aaaaaccgaa
18901	gagtatggag	ggagggttct	taaacctgaa	actaaaatga	aaccttgcta	cggatctttt
18961	gctaaacct	ctaataattaa	aggaggtcag	gcaaaggtaa	aacccaaaga	agacgatggc
19021	actaacaaca	tcgagtatga	cattgacatg	aacttctttg	acttaagatc	acaaagatca
19081	gaactcaaac	ctaaaattgt	aatgtatgca	gaaaatgtgg	acctggaatg	tccagatact
19141	catgttgtgt	acaaacctgg	agtttcagat	gctagttctg	agaccaatct	tggacaacag
19201	tctatgcccc	acagacccaa	ctacattggc	ttcagagata	acttcatcgg	acttatgtac
19261	tataacagta	ctggcaacat	gggggtactg	gctggccaag	cgctcagtt	gaatgcagtg
19321	gttgacttgc	aggacagaaa	cacagaactg	tcttaccaac	tcttgcttga	ctctctgggc
19381	gacagaacca	gatacttttag	catgtggaat	caggctgtgg	acagttatga	tctgttgata
19441	cgtgttattg	aaaatcatgg	tgtggaagat	gaacttccca	actattgttt	tccgttggat

FIG. 3A-5

19501	ggtgtcggtc	cgcgaaacaga	tagttacaag	gagattaagc	caaattggaga	ccaatctact
19561	tggacaaatg	tagaccaaac	tggcagcagt	gaacttgcta	agggaaatcc	atttgccatg
19621	gaaatttaacc	ttcaagccaa	tctatggcga	agtttccttt	attccaatgt	ggctctatat
19681	ctcccagact	cgtacaaata	caccccgctc	aatgtcactc	ttccagaaaa	caaaaacacc
19741	tacgactaca	tgaacgggcg	ggtggtgccc	ccatctctag	tagacaccta	tgtgaacatt
19801	ggtgccaggt	ggtctctgga	tgccatggac	aatgtcaacc	cattcaacca	ccaccgtaac
19861	gctggcttgc	gttaccgate	catgcttctg	ggtaacggac	gttatgtgcc	tttccacata
19921	caagtgcctc	aaaaattctt	cgctgttaaa	aacctgctgc	ttctcccagg	ctcctacact
19981	tatgagtggg	acttttaggaa	ggatgtaaac	atggttctac	agagtccctt	cggtaacgac
20041	ctacgggtag	atggcgccag	catcagtttt	acgagcatca	acctctatgc	tacttttttc
20101	cccatggctc	acaacaccgc	ttccaccctt	gaagccatgc	tgcggaatga	caccaatgat
20161	cagtcattca	acgactacct	atctgcagct	aacatgctct	accccaattc	tgccaatgca
20221	accaatatct	ccatttccat	tccttctcgc	aactgggccc	ctttcagagg	ctgggtcattt
20281	accagactga	aaaccaaaaga	aactccctct	ttggggctctg	gatttgaccc	ctacttcgct
20341	tattctgggt	ctattcccta	cctggatggt	accttctacc	tgaaccacac	ttttaagaag
20401	gtttccatca	tgtttgactc	ttcagtgagg	tgccctggaa	atgacagggt	atgacatcct
20461	aacgaatttg	aaataaaagcg	cactgtggat	ggcgaaggct	acaacgtagc	ccaatgcaac
20521	atgaccaaag	actggttctt	ggtacagatg	ctcgccaact	acaacatcgg	ctatcagggc
20581	ttctacatct	cagaaggata	caaagatcgc	atgtattcat	ttttcagaaa	cttccagccc
20641	atgagcaggc	aggtggttga	tgagggtcaat	tacaaagact	tcaaggccgt	cgccaatccc
20701	taccaacaca	acaactctgg	ctttgtgggt	tacatggctc	cgaccatcgc	tcaagggtcaa
20761	ccctatcccg	ctaactatcc	ctatccactc	attggaacaa	ctgccgtaaa	tagtggttacg
20821	cagaaaaagt	tcttgtgtga	cagaaccatg	tgccgcatac	cgttctcaag	caacttcatg
20881	tctatgggag	cccttacaga	cttgggacag	aacatgctct	atgccaaact	agctcatgct
20941	ctggacatga	cctttgaggt	ggatcccatg	gatgagccca	ccctgcttta	tcttctcttc
21001	gaagttttctg	acgtgggtcag	agtgcattcag	ccacaccgcg	gcattcatcga	ggcagttctac
21061	ctgcgtacac	cgttctcggc	cggtaacgct	accacgtaag	aagcttcttg	cttcttgcaa
21121	acagcagctg	caaccatggc	ctgcccagtc	caaaacggct	ccagcgagca	agagctcaga
21181	gccattgtcc	aagacctggg	ttgcggacca	tatttttttg	gaaccttgga	taagcgtctc
21241	ccgggggttca	tgccccccga	taagctcgcc	tgtgccattg	taaatacggc	cggacgtgag
21301	acgggggggag	agcactgggt	ggctttcggg	tggaacccac	gttctaacac	ctgctacctt
21361	tttgatcctt	ttggattctc	ggatgatcgt	ctcaaacaga	tttaccagtt	tgaatatgag
21421	ggtctcctgc	gccgcagcgc	tcttctacc	aaggaccggg	gtattacggt	ggaaaaatct
21481	accagaccgc	tgcagggccc	ccgttctgcc	gcctgcggac	ttttctgctg	catgttcctt
21541	catgcctttg	tgcactggcc	tgaccgtccc	atggacggaa	acccaccat	gaaattgcta
21601	actggagtg	caaacaacat	gcttcattct	cctaaagtcc	agccaccctt	gtgtgacaat
21661	caaaaagcac	tctaccattt	tctcaatacc	cattcgccct	attttcgctc	tcactgtaca
21721	cacatcgaaa	gggccactgc	gttcgaccgt	atggatgtgc	aataatgatt	catgtaaaca
21781	acgtgttcaa	taaacagcac	tttatttttt	acatgtatcg	aggctctgga	ttacttattt
21841	atttacaagt	cgaatgggtt	ctgacgagaa	tcagaatgac	ccgcaggcag	tgatacgttg
21901	cggaaactgat	acttgggttg	ccacttgaat	tcgggaatca	ccaacttggg	aaccggtata
21961	tcgggcagga	tgctactcca	cagctttctg	gtcagctgca	aagctcccag	caggtcagga
22021	gccgaaatct	tgaaatcaca	attaggacca	gtgctctgag	cgcgagagtt	gcggtacacc
22081	ggattgcagc	actgaaacac	catcagcgac	ggatgtctta	cgcttgccag	cacggtggga
22141	tctgcaatca	tgcccacatc	cagatcttca	gcattggcaa	tgctgaacgg	ggctcatctg
22201	caggtctgcc	taccatggc	ggcaccctaa	ttaggcttgt	ggttacaatc	gcagtgcagg
22261	gggatcagta	tcattcttggc	ctgatcctgt	ctgattcctg	gatacacggc	tctcatgaaa
22321	gcattcatatt	gcttgaaagc	ctgctgggct	ttactaccct	cggtataaaa	catcccgcag
22381	gacctgctcg	aaaactgggt	agctgcgcag	ccggcatcat	tcacacagca	gcgggcgtca
22441	ttgttggcta	tttgcaccac	acttcgtccc	cagcggtttt	gggtgatttt	ggttcgctcg
22501	ggattctcct	tcaaggctcg	ttgtccgttc	tcgtggcca	catccatctc	gataatctgc
22561	tccttctgaa	tcataatatt	gccatgcaag	cacttcagct	tgccctcata	atcattgcag
22621	ccatgaggcc	acaacgcaca	gcctgtacat	tcaccaattat	gggtggcgat	ctgagaaaaa
22681	gaatgtatca	ttccctgcag	aaatcttccc	atcatcgtgc	tcagtgtctt	gtgactagtg
22741	aaagttaact	ggatgcctcg	gtgctcctcg	ttcacgtact	ggtgacagat	gcgcttgtat
22801	tgttcgtgct	gctcaggcat	tagtttaaaa	gaggttctaa	gttcggttatc	cagcctgtac
22861	ttctccatca	gcagacacat	cacttccatg	cctttctccc	aagcagacac	caggggcaag
22921	ctaactcggat	tcttaacagt	gcaggcagca	gctcctttag	ccagagggtc	atctttggcg
22981	actcttctcaa	tgettctttt	gccatccttc	tcaacgatgc	gcacggcgcg	gacgtgaaa
23041	cccatgcta	caagttgcgc	ctcttctctt	tcttcttcgc	tgtcttgact	gatgtcttgc
23101	atggggacat	gtttgggtctt	ccttggcttc	tttttcgggg	gtatcggagg	aggaggactg
23161	tcgctccgtt	ccggagacag	ggaggattgt	gacgtttcgc	tcaccattac	caactgactg
23221	cgcgtagaag	aacctgaccc	cacacggcga	caggtgtttc	tcttcggggg	cagaggtgga
23281	ggcgatttgcg	aagggtctgcg	gtccgacctg	gaaggcggat	gactggcaga	acccctcccg
23341	cgttcggggg	tgtgctccct	gtggcggtcg	cttaactgat	ttccttcgcg	gctggccatt

FIG. 3A-6

23401	gtgtttctcct	aggcagagaa	acaacagaca	tggaaactca	gccattgctg	tcaacatcgc
23461	cacgagtgcc	atcacatctc	gtcctcagcg	acgaggaaaa	ggagcagagc	ttaaagcattc
23521	caccgcccag	tcctgccacc	acctctaccc	tagaagataa	ggaggtcgac	gcattctcatg
23581	acatgcagaa	taaaaaagcg	aaagagtctg	agccagacat	cgaacaagac	ccgggctatg
23641	tgacaccggt	ggaacacgag	gaagagttga	aacgctttct	agagagagag	gatgaaaact
23701	gccccaaaaca	gcaagcggat	aactatcacc	aagatgctgg	aaatagggat	cagaacaccg
23761	actacctcat	agggcttgac	ggggaagacg	cgctccttaa	acatctagca	agacagtcac
23821	tcatagtcaa	ggatgcatta	ttggacagaa	ctgaagtgcc	catcagtgtc	gaagagctca
23881	gccgcgccta	cgagcttaac	ctattttcac	ctcgtactcc	ccccaaacgt	cagccaaacg
23941	gcacctgcga	gccaaatcct	cgcttaaact	tttatccagc	ttttgctgtg	ccagaagtac
24001	tggtaccta	tcacatcttt	tttaaaaatc	aaaaaattcc	agtctcctgc	cgcgctaact
24061	gcacccgcgc	cgatgcccta	ctcaatctgg	gacctgggtc	acgcttacct	gatatagctt
24121	ccttggaaga	ggttccaaag	atctctcagg	gtctgggcaa	taatgagact	cgggcccga
24181	atgctctgca	aaagggagaa	aatggcatgg	atgagcatca	cagcgttctg	gtggaattgg
24241	aaggcagata	tgccagactc	gtaagctatg	agcgaagcgt	cgaggtcaca	cactttgcat
24301	accccgctgt	caacctgccc	cctaagtcga	tgacggccgt	catggaccag	ttactcatta
24361	agcgcgcaag	tcctctttca	gaagacatgc	atgaccacga	tgctgtgat	gagggtaaac
24421	cagtggtcag	tgatgagcag	ctaaccgat	ggctgggcac	cgactctccc	cgggatttgg
24481	aagagctcgc	caagcttatg	atggccgtgg	tgctgggtac	cgtagaacta	gagtgtcttc
24541	ggcgtttctt	taccgattca	gaaaccttgc	gcaaactcga	agagaactct	gactacatta
24601	ttagacacgg	ctttgtgcgg	caggcatgca	agatatctaa	cgtggaaactc	accaacctgg
24661	tttctacat	gggtattctg	catgagaatc	gcctaggaca	aagcgtgctg	cacagcacc
24721	ttaaggggga	agcccgcctg	gattacatcc	gcgatttgtg	ttatctctac	ctgtgccaca
24781	ctgtggcaaac	cggcatgggt	gtatggcagc	aatgtttaga	agaacagaa	ctgaaagagc
24841	taaacaagct	cttacagaaa	tctcttaagg	ttctgtggac	aggggtcgac	gagcgcaccg
24901	tcgcttccga	cctggcagac	ctcatcttcc	cagagcgtct	caggggtact	ttgcgaaacg
24961	gactgcctga	ctttatgagc	cagagcatgc	ttaacaattt	tcgctctttc	atcctggaac
25021	gctccggtat	cctgcccgcc	acctgctgcg	cactgccctc	cgactttgtg	cctctcacct
25081	accgcgaatg	cccccgccg	ctatggagtc	actgctacct	gttcgctctg	gccaactacc
25141	tctcctacca	ctcggatgtg	atcgaggatg	tgagcggaga	cggcttgctg	gagtgtcact
25201	gccgctgcaa	tctgtgcacg	ccccaccggt	ccctagcttg	caacccccag	ttgatgagcg
25261	aaaccagat	aataggcacc	tttgaattgc	aaggccccag	cagccaaggc	gatgggtctt
25321	ctcttgggca	aagtttaaaa	ctgaccccg	gactgtggac	ctccgcctac	ttgcgcaagt
25381	ttgccccgga	agattaccac	ccctatgaaa	tcaagttcta	tgaggacca	tcacagctc
25441	cgaaagccga	actttcggcc	tgctgcacat	cccagggggc	aattctggcc	caattgcaag
25501	ccatccaaaa	atccccgcaa	gaatttctac	tgaaaaaggg	taaggggggc	taccttgacc
25561	cccagaccgg	cgaggaaact	aacacaaggt	tcctcagga	tgtcccaacg	acgagaaaagc
25621	agaagttga	aggtgcagcc	gccgccccca	gaagatatgg	aggaagattg	ggacagtcag
25681	gcagaggaag	cggaggagga	ggacagtctg	gaggacagtc	tggaaggaag	cagtttggag
25741	gaggaaaacg	aggaggcaga	ggaggtggaa	gaagtaaccg	ccgacaaaca	gttatcctcg
25801	gctcgggaga	caagcaacag	cgctaccatc	tcgcgtccga	gtcaggaagc	ccggcgccgt
25861	cccagcagta	gatgggacga	gaccggacgc	ttcccgaacc	caaccagcgc	ttccaagacc
25921	ggtaagaagg	atcggcaggg	atacaagtcc	tgccgggggc	ataagaatgc	catcatctcc
25981	tgcttgcatg	agtgcggggg	caacatatcc	ttcacgcggc	gctacttgct	attccaccat
26041	ggggtgaact	ttccgcgcaa	tgttttgcat	tactaccgtc	acctccacag	cccctactat
26101	agccagcaaa	tcctggcagc	ctcgacagat	aaagacagcg	gcggcgacct	ccaacagaaa
26161	accagcagcg	gcagttagaa	aatacacaa	aagtgcagca	acaggaggat	taaagattac
26221	agccaacgag	ccagcgcaaa	cccgagagtt	aagaaatcgg	atcttttcaa	ccctgtatgc
26281	catcttccag	cagagtcggg	gccaagagca	ggaactgaaa	ataaaaaacc	gatctctgcg
26341	ttcgctcacc	agaagttggt	tgtatcacia	gagcgaagat	caacttcagc	gcactctcga
26401	ggacgccgag	gctctcttca	acaagtactg	cgcgctgact	cttaaagagt	aggcagcgac
26461	cgcgcttatt	caaaaaaggc	gggaattaca	tcattcctcga	catgagtaaa	gaaattccca
26521	cgccttaccat	gtggagttat	cagccccaaa	tggtattggc	ggcagggccc	tcccaggact
26581	actccaccgc	catgaattgg	ctcagcgccg	ggccttctat	gatttctcga	gttaattgata
26641	tacgcgccta	ccgaaaccaa	atacttttgg	aacagtcagc	tcttaccacc	acgccccgcc
26701	aacaccttaa	tcccagaaat	tgcccccggc	ccctagtgtg	ccaggaaagt	cccgtcccca
26761	ccactgtatt	acttctctga	gacgcccagg	ccgaagtcca	aatgactaat	gcaggtgcgc
26821	agttagcggg	cggctccacc	ctatgtcgtc	acaggcctcg	gcataatata	aaacgcctga
26881	tgatcagagg	cagaggtatc	cagctcaacg	acgagtcggg	gagctctccg	cttggtctac
26941	gaccagacgg	aatctttcag	attgccggct	cggggagatc	ttccttcacc	cctgctcagg
27001	ctgttctgac	tttggaaggt	tcgtcttcgc	aaccccgctc	gggcggaatc	gggaccgttc
27061	aatttgtgga	ggagtttact	ccctctgtct	acttcaaccc	cttctccgga	tctcctgggc
27121	actaccggga	cgagttcata	ccgaacttcg	acgcgattag	cgagtcagtg	gacggctacg
27181	attgatgtct	ggtgacgcgg	ctgagctatc	tcggctgcga	catctagacc	actgcccgcc
27241	ctttcgctgc	tttgcccggg	aactcattga	gttcatctac	ttcgaaactcc	ccaaggatca

FIG. 3A-7

27301	ccctcaaggt	ccggcccacg	gagtgccgat	tactatcgaa	ggcaaaatac	actctcgcct
27361	gcaacgaatt	ttctcccagc	ggcccgtgct	gatcgagcga	gaccagggaa	acaccacggt
27421	ttccatctac	tgcatTTgtA	atcaccccg	attgcatgaa	agcctttgct	gtcttatgtg
27481	tactgagttt	aataaaaaact	gaattaagac	tctcctacgg	actgccgctt	cttcaacccg
27541	gattttacaa	ccagaagaac	gaaacttttc	ctgtcgtcca	ggactctgtt	aacttcacct
27601	ttcctactca	caaactagaa	gctcaacgac	tacaccgctt	ttccagaagc	atTTtcccta
27661	ctaatactac	tttcaaaacc	ggaggtgagc	tccaaggtct	tcctacagaa	aacccttggg
27721	tgaagcggg	ccttgtagtg	ctaggaattc	ttgcgggtgg	gcttggtgatt	attcctttgct
27781	acctatacac	accttgcttc	actttcctag	tggtgttgtg	gtattggttt	aaaaaatggg
27841	gcccatacta	gtcttgcttg	ttttactttc	gcttttgtaa	ccgggttctg	ccaattacga
27901	tccatgtcta	gacttcgacc	cagaaaactg	cacacttact	tttgcacccg	acacaagccg
27961	caactgtgga	gttcttatta	agtgcggtg	ggaatgcagg	tcctgtgaaa	ttacacacaa
28021	taacaaaacc	tggaacaata	ccttatccac	cacatgggag	ccaggagttc	ccgagtggta
28081	cactgtctct	gtccgaggtc	ctgacggttc	catccgcatt	agtaacaaca	ctttcatttt
28141	ttctgaaatg	tgcatcttg	ccatgttcac	gagcaaacag	tattctctat	ggcctcctag
28201	caagacaac	atcgtaacgt	tctccattgc	tatttgcttg	tgcgcttgcc	ttcctttgct
28261	tttactgtgc	gtatgcatac	acctgcttgt	aaccactcgc	atcaaaaacg	ccaataacaa
28321	agaaaaaatg	ccttaacctc	tttctgttta	cagacatggc	ttctcttaca	tctctcatat
28381	ttgtcagcat	tgctactgcc	gctcacggag	aaacagtcgt	ctctatccct	ctaggacata
28441	attacactct	ctaggacct	ccaactcact	cagaggtcat	ctggacaacg	ttcacacacg
28501	ttgattactt	tgatataatc	tgcaacaaaa	caaaaccaat	aatagtaact	tgcaacatac
28561	aaaatcttac	attgattaat	gttagcaaag	tttacagcgg	ttactattat	ggttatgaca
28621	gatacagtag	tcaatataga	aattacttgg	ttcgtgttac	ccagttaaaa	accacgaaaa
28681	tgccaaatat	ggcaaagatt	cgatccgatg	acaattctct	agaaaactttt	acatctccca
28741	ccacaccgga	cgaaaaaaac	atcccgattt	caatgattgc	aattgttgca	gcggtggcag
28801	tggtgatggc	actaataata	atatgcatgc	ttttatatgc	ttgtcgttac	aaaaagtttc
28861	atcctaaaaa	acaagatctc	ctactaaggc	ttaacattta	atTTtctttt	atacagccat
28921	ggtttccact	accacattcc	ttatgcttac	tagtcttgca	actctgactt	ctgtctgcct
28981	acacctcact	gtaactatag	gctcaaacct	cacactaaaa	ggagctcaag	tggtctatgt
29041	cttttggtgg	agaatatatg	acaatggatg	gtttacaaaa	ccatgtgacc	aacctggtag
29101	atTTtctctgc	aacggcgagag	acctaacctat	tatcaacgtg	acagcaaatg	acaaaggcct
29161	ctattatgga	accgactata	aaagtagttt	agattataac	attattgtac	tgccatctac
29221	ccatccagca	ccccgcacaa	ctactttctc	tagcagcagt	gtcgcagcag	gtcgaatttc
29281	caatccaacc	tttgccgcgc	ttttaaaacg	cactgtgaat	aattctacaa	cttcacatac
29341	aacaattttcc	acttcaacaa	tcagcattat	cgctgcagtg	acaattggaa	tatctattct
29401	tgttttttacc	ataacctact	acgcctgctg	ctatagaaaa	gacaaacata	aagggtgatcc
29461	attcttttaga	tttgatatTT	aatttgtttc	tttttttttt	attttagcta	tggtgaacac
29521	caatcatggt	acctagaaat	ttcttcttca	ccatactcat	ttgtgcattt	aatgtttgcy
29581	ctacttttcac	agcagtagcc	acagcaaccc	cagactgtat	aggagcattt	gcttccctatg
29641	cacttttttgc	ttttgttact	tgcatctcg	tatgtagcat	agtctgcctg	gttattaatt
29701	ttttccaaact	tctagactgg	atcctttgtg	gaattgccta	cctgcgccac	catcccgaat
29761	accgcaacca	aaatatcgcg	gcacttctta	gactcatcta	aaacctgca	ggcttactata
29821	ccaatatTTT	tgcttctatt	gcttccctac	gctgtctcaa	ccccagctgc	ctatagtact
29881	ccaccagaac	accttagaaa	atgcaaattc	caacaaccgt	ggtcatttct	tgcttgctat
29941	cgagaaaaat	cagaaattcc	cccaaattta	ataatgattg	ctggaataat	taataataatc
30001	tgttgcacca	taatttcatt	tttgatatac	ccccgatttg	atTTtggctg	atTTtggctcc
30061	aatgcacatg	atcatccaca	agaccagag	gaacacattc	ccctacaaaa	catgcaacat
30121	ccaatagcgc	taatagatta	cgaaagtga	ccacaacccc	cactactccc	tgctattagt
30181	tacttcaacc	taaccggcgg	agatgactga	aacactcacc	acctccaatt	ccgccaggga
30241	tctgctcgat	atggacggcc	gcgtctcaga	acagcgactt	gccccactac	gcattccgca
30301	gcagcaggaa	cgcgcgggca	aagagctcag	agatgtcatc	caaattcacc	aatgcaaaaa
30361	aggcatattc	tgtttggtaa	aacaagccaa	gatatcctac	gagatcaccg	ctactgacca
30421	tccctctctc	tacgaacttg	gcccccaacg	acaaaaattt	acctgcatgg	tggaatcaa
30481	ccccatagtt	atcacccagc	aaagtggaga	tactaagggt	tgcatctact	gctcctacga
30541	ttccatcgag	tgcacctaca	ccctgtgtaa	gacctatgc	ggcctaagag	acctgtacc
30601	aatgaattaa	aaaatgatta	ataaaaaatc	acttacttga	aatcagcaat	aaggctctctg
30661	ttgaaatttt	ctcccagcag	cacctcactt	ccctcttccc	aactctggta	ttctaaaccc
30721	cgttcagcgg	catactttct	ccatacttta	aaggggatgt	caaatttttag	ctcctctcct
30781	gtaccacaaa	tcttcatgtc	tttcttccca	gatgaccaag	agagtccggc	tcagtgactc
30841	cttcaaccct	gtctaccctt	atgaagatga	aagcacctcc	caacacccct	ttataaaccc
30901	agggtttatt	tccccaaatg	gcttcacaca	aagcccagac	ggagtcttta	ctttaaaatg
30961	tttaacccca	ctaacaacca	cagggcgatc	tctacagcta	aaagtgggag	ggggacttac
31021	agtggatgac	actgatggta	ccttacaaga	aaacatacgt	gctacagcac	ctattactaa
31081	aaataatcac	tctgtagaac	tatccattgg	aaatggatta	gaaactcaaa	acaataaact
31141	atgtgccaaa	ttgggaaatg	ggttaaaatt	taacaacggt	gacatttgta	taaaggatag

FIG. 3A-8

31201	tattaacacc	ttatggactg	gaataaaccc	tccacctaac	tgtcaaattg	tggaaaacac
31261	taatacaaat	gatggcaaac	ttacttttagt	attagtaaaa	aacggagggc	ttgttaatgg
31321	ctacgtgtct	ctagttgggtg	tatcagacac	tgtgaaccaa	atgttcacac	aaaagacagc
31381	aaacatccaa	ttaagattat	attttgactc	ttctggaaat	ctattaactg	atgaatcaga
31441	cttaaaaatt	ccacttaaaa	ataaatcttc	tacagcgacc	agtgaactg	tagccagcag
31501	caaagccttt	atgccaaagta	ctacagctta	tcccttcaac	accactacta	gggatagtga
31561	aaactacatt	catggaatat	gttactacat	gactagttaa	gatagaagtc	tatttccctt
31621	gaacattttct	ataatgctaa	acagccgtat	gatttcttcc	aatgttgcct	atgccataca
31681	atttgaatgg	aatctaaatg	caagtgaatc	tccagaaaagc	aacatagcta	cgctgaccac
31741	atcccccttt	ttctttttctt	acattacaga	agacgacaac	taaaataaag	tttaagtgtt
31801	tttattttaa	atcacaaaat	tcgagttagtt	attttgcctc	caccttccca	tttgacagaa
31861	tacaccaatc	tctccccacg	cacagcttta	aacatttggga	taccattaga	gatagacatt
31921	gttttagatt	ccacattcca	aacagtttca	gagcgagcca	atctgggggtc	agtgatagat
31981	aaaaatccat	cgcgatagtc	ttttaaagcg	ctttcacagt	ccaactgctg	cggatgcgaa
32041	tccggagtc	ggatcacgggt	catctggaag	aagaacgatg	ggaatcataa	tccgaaaacg
32101	gtatacggacg	attgtgtctc	atcgaaccca	caagcagccg	ctgtctcgctg	cgctccgtgc
32161	aactgctgtt	tatgggatca	gggtccacag	tgtcctgaag	catgatttta	atagccctta
32221	acatcaactt	tctggtgcga	tgcgcgcagc	aacgcattct	gatttctactc	aaatctttgc
32281	agtaggtaca	acacattatt	acaatatgtt	ttaataaacc	ataattaaa	gcgctccagc
32341	caaaactcat	atctgatata	atcgccctgt	catgaccatc	ataccataaa	ttaatataaa
32401	ttaaatgacg	ttccctcaaa	aacacactac	ccacatacat	gatctctttt	ggcatgtgca
32461	tattaacaat	ctgtctgtac	catggacaac	gttggttaat	catgcaaccc	aatataacct
32521	tccggaacca	cactgccaac	accgctcccc	cagccatgca	ttgaagtga	ccctgctgat
32581	tacaatgaca	atgaagaacc	caattctctc	gaccgtgaat	cacttgagaa	tgaataatat
32641	ctatagtggc	acaacataga	cataaatgca	tgcattctct	cataattttt	aactcctcag
32701	gatttagaaa	catatcccag	ggaataggaa	gctcttgca	aacagtaaag	ctggcagaac
32761	aaggaagacc	acgaacacaa	cttacactat	gcatagtcac	agtatcacaa	tctggcaaca
32821	gcgggtgggtc	ttcagtcata	gaagctcggt	tttcattttc	ctcacacgt	ggtaactggg
32881	ctctgggtga	agggtgatgt	atcgcgcatg	atgtcgagcg	tgcgcgcaac	tgtgtcataa
32941	tggagttgct	tcctgacatt	ctcgtatttt	gtatagcaaa	acgcgccct	ggcagaacac
33001	actcttcttc	gccttctatc	ctgcgcctta	gcgtgttccg	tgtgatagtt	caagtacagc
33061	cacactctta	agttggtcaa	aagaatgctg	gcttcagttg	taatcaaaac	tccatcgcat
33121	tacaattgttc	tgaggaaatc	atccacggtg	gcatatgcaa	atcccaacca	agcaaatgcaa
33181	ctggatttgcg	tttcaagcag	gagaggagag	ggaagagacg	gaagaaccat	gttaattttt
33241	attccaaacg	atctcgcatg	acttcaaatt	gtagatcgcg	cagatggcat	ctctcgcccc
33301	cactgtgttg	gtgaaaaagc	acagctaaat	caaaagaaat	gcgattttca	agggtgctcaa
33361	cggtggcttc	caacaaagcc	tccacgcgca	catccaagaa	caaaagaata	caaaagaag
33421	gagcattttc	taactcctca	atcatcatat	tacattcctg	caccattccc	agataatttt
33481	cagctttcca	gccttgaatt	attcgtgtca	gttcttgtgg	taaatccaat	ccacacatta
33541	caaacaggtc	ccggaggggc	ccctccacca	ccattcttaa	acacaccctc	ataatgacaa
33601	aatatcttgc	tcctgtgtca	ctgtgagca	attgagaatg	gcaacatcaa	ttgatggcc
33661	cttggtctta	agttcttctt	taagttctag	ttgtaaaaac	tctctcatat	tatcaccaa
33721	ctgcttagcc	agaagcccc	cggaacaag	agcaggggac	gctacagtgc	agtacaagcg
33781	cagacctccc	caattggctc	cagcaaaaac	aagattggaa	taagcatatt	gggaaccgcc
33841	agtaatatca	tcgaagtgtc	tggaaatata	atcaggcaga	gtttcttgtg	aaaattgaa
33901	aaaagaaaaa	tttgccaaaa	aaacattcaa	aacctctggg	atgcaaattg	aataggttac
33961	cgcgctgcgc	tccaacattg	ttagttttga	attagtctgc	aaaaataaaa	aaaaaaacaa
34021	gcgtcatatc	atagtagcct	gacgaacagg	tggataaaatc	agtctttcca	tcacaagaca
34081	agccacaggg	tctccagctc	gacctctgta	aaacctgtca	tggtgattaa	acaacagcac
34141	cgaaagtccc	tcgcggtgac	cagcatgaat	aattcttgat	gaagcataca	atccagacat
34201	gttagcatca	gttaacgaga	aaaaacagcc	aacatagcct	ttgggtataa	ttatgcttaa
34261	tcgtaagtat	agcaaagcca	cccctcgcg	atacaaagta	aaaggcacag	gagaataaaa
34321	aatataatta	tttctctgct	gctgttcagg	caacgtcgcc	cccggctcct	ctaaatacac
34381	atacaaagcc	tcattcagcca	tggtttacca	gacaaaagta	agcgggcacg	acagaagctc
34441	aaagtcactc	tccaacctct	ccacaatata	tatacacaa	ccctaaactg	acgtaatggg
34501	agtaaagtgt	aaaaaatccc	gccaaaccca	acacacaccc	cgaaactcg	tcaccagggg
34561	aaagtacagt	ttcacttccg	caatcccaac	aagcgtcact	tcctctttct	cacggtacgt
34621	cacatcccat	taacttgcaa	cgctcatttt	ccacggccgc	gccgccccgt	ttagccgtta
34681	acccacagc	caatcaccac	acacccca	atttttaaaa	tcacctcatt	tacatattgg
34741	caccattcca	tctataaggt	atattattga	tgatg		

FIG. 3A-9

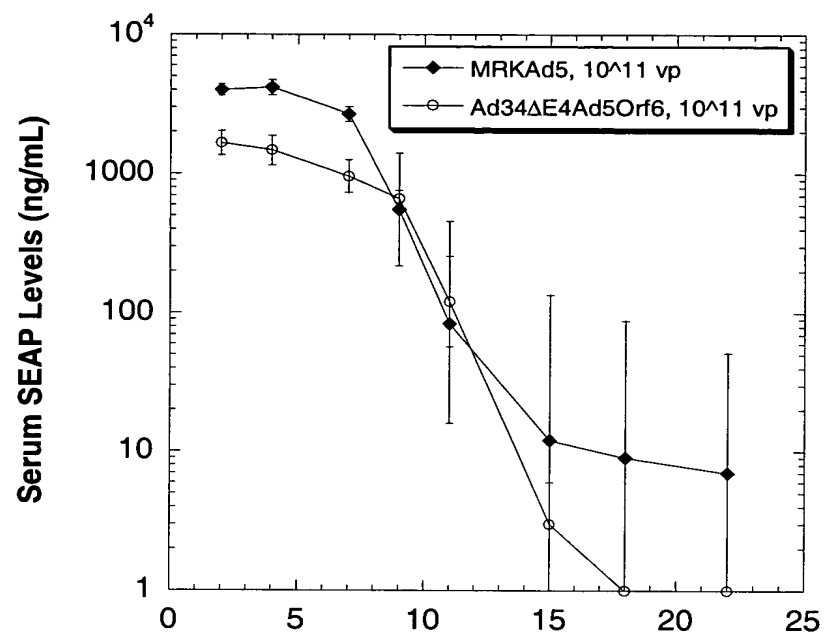


FIG. 4

Vaccine Wk 0, 4, 24	Monkey ID	Pre		Wk 4		Wk 8		Wk 24		Wk 28		Wk 36	
		Mock	Gag*	Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag
MRKAd5gag, 10 ⁴ 11 vp	00C018	1	5	13	1025	0	824	8	756	0	474	0	383
MRKAd5gag, 10 ⁴ 11 vp	00C034	0	4	5	219	5	404	3	445	3	339	0	216
MRKAd5gag, 10 ⁴ 11 vp	00C058	4	4	3	1086	0	440	4	1439	0	2338	0	940
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D038	6	8	5	111	1	301	0	224	1	536	0	233
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D042	6	30	4	89	4	264	1	73	0	181	0	69
Ad34ΔE1gagΔE4Ad5Orf6, 10 ⁴ 11 vp	00D066	3	18	1	118	1	816	0	429	0	439	0	273

FIG. 5

Vaccine	Monk ID	IFN- γ ⁺ CD4 ⁺ CD3 ⁺ per 10 ⁶ Lymphocytes		IFN- γ ⁺ CD8 ⁺ CD3 ⁺ per 10 ⁶ Lymphocytes	
		Mock	Gag ^a	Mock	Gag ^a
Ad34ΔE1gagΔE4Ad5Orf6	00D038	22	154	130	450
	00D042	32	118	96	171
	00D066	12	238	150	442

FIG. 6

Sequence of the open reading frame for FL-gag (human codon optimized)

atgggtgctagggcttctgtgctgtctgggtgggtgagctggacaagtgggagaagatcaggctgaggcctgggtggc
aagaagaagtacaagctaaagcacattgtgtggggcctccagggagctggagagggtttgctgtgaaccctggcctg
ctggagacctctgaggggtgcaggcagatcctggggccagctccagccctccctgcaaacaggctctgaggagctg
aggccccctgtacaacacagtggtaccctgtactgtgtgcaccagaagattgatgtgaaggacaccaaggaggcc
ctggagaagattgaggaggagcagaacaagtccaagaagaaggcccagcaggctgctgctggcacaggcaactcc
agccaggtgtcccagaactacccccattgtgcagaacctccagggccagatgggtgcaccaggccatctccccccgg
accctgaatgcctgggtgaaggtgggtggaggagaaggccttctccccctgaggtgatccccatgttctctgcctg
tctgaggggtgccacccccagggacctgaacaccatgctgaacacagtggggggccatcaggctgccatgcagatg
ctgaaggagaccatcaatgaggaggctgctgagtgaggacaggctgcacccctgtgcacgctggccccattgcccc
ggccagatgagggagcccaggggctctgacattgctggcaccacctccaccctccaggagcagattggctggatg
accaacaacccccccatccctgtgggggaaatctacaagaggtggatcatcctgggcctgaacaagattgtgagg
atgtactccccacctccatcctggacatcaggcagggccccaaggagcccttcaggggactatgtggacagggttc
tacaagaccctgagggctgagcaggcctcccaggaggtgaagaactggatgacagagaccctgctggtgcagaat
gccaaccttgactgcaagaccatcctgaaggccctggggcctgctgccaccctggaggagatgatgacagcctgc
cagggggtggggggccctgggtcacaaggccaggggtgctggctgaggccatgtcccagggtgaccaactccgccacc
atcatgatgcagagggggcaacttcaggaaccagaggaagacagtgaagtgcttcaactgtggcaagggtggggccac
attgccaagaactgtaggggccccaggaagaagggtgctggaagtgtggcaaggagggccaccagatgaaggac
tgcaatgagagggcaggccaacttcctgggcaaaatctggccctcccacaagggcaggcctggcaacttcctccag
tccaggcctgagcccacagccccctcccaggagatccttcagggtttggggaggagaagaccacccccagccagaag
caggagcccattgacaaggagctgtacccccctggcctccctgaggtccctggtttggcaacgacccccctcctcccag
taaaataaagccccgggcagat

FIG. 7

1	ccattgcata	cgttgtatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgct
181	ggctgaccgc	ccaacgaccc	cgcgccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggacttttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtac	atcaagtgtg	tcatatgcc	agtacgcccc	ctattgacgt	caatgacggg
361	aaatggcccg	cctggcatta	tgcccagtac	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggcgtggat	agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatgggccc	taggcgtgta	cgggtgggagg	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccgggacc	gatccagcct	cgcgggccgg	gaacgggtgca	ttggaacgcg	gattccccgt
781	gccaaagagt	agatctacca	TGGGTGCTAG	GGCTTCTGTG	CTGTCTGGTG	GTGAGCTGGA
841	CAAGTGGGAG	AAGATCAGGC	TGAGGCCTGG	TGGCAAGAAG	AAGTACAAGC	TAAAGCACAT
901	TGTGTGGGCC	TCCAGGGAGC	TGGAGAGGTT	TGCTGTGAAC	CCTGGCCTGC	TGGAGACCTC
961	TGAGGGGTGC	AGGCAGATCC	TGGGCCAGCT	CCAGCCCTCC	CTGCAAACAG	GCTCTGAGGA
1021	GCTGAGGTCC	CTGTACAACA	CAGTGGCTAC	CCTGTACTGT	GTGCACCAGA	AGATTGATGT
1081	GAAGGACACC	AAGGAGGCC	TGGAGAAGAT	TGAGGAGGAG	CAGAACAAGT	CCAAGAAGAA
1141	GGCCAGCAG	GCTGCTGCTG	GCACAGGCAA	CTCCAGCCAG	GTGTCCCAGA	ACTACCCCAT
1201	TGTGCAGAAC	CTCCAGGGCC	AGATGGTGCA	CCAGGCCATC	TCCCCCGGGA	CCCTGAATGC
1261	CTGGGTGAAG	GTGGTGGAGG	AGAAGGCCTT	CTCCCCTGAG	GTGATCCCCA	TGTTCTCTGC
1321	CCTGTCTGAG	GGTGCCACCC	CCCAGGACCT	GAACACCATG	CTGAACACAG	TGGGGGGCCA
1381	TCAGGCTGCC	ATGCAGATGC	TGAAGGAGAC	CATCAATGAG	GAGGCTGCTG	AGTGGGACAG
1441	GCTGCATCCT	GTGCACGCTG	GCCCCATTGC	CCCCGGCCAG	ATGAGGGAGC	CCAGGGGCTC
1501	TGACATTGCT	GGCACCACCT	CCACCCTCCA	GGAGCAGATT	GGCTGGATGA	CCAACAACCC
1561	CCCCATCCCT	GTGGGGGAAA	TCTACAAGAG	GTGGATCATC	CTGGGCCTGA	ACAAGATTGT
1621	GAGGATGTAC	TCCCCACCT	CCATCCTGGA	CATCAGGCAG	GGCCCCAAGG	AGCCCTTCAG
1681	GGACTATGTG	GACAGGTTCT	ACAAGACCCT	GAGGGCTGAG	CAGGCCTCCC	AGGAGGTGAA
1741	GAAGTGGATG	ACAGAGACCC	TGCTGGTGCA	GAATGCCAAC	CCTGACTGCA	AGACCATCCT
1801	GAAGGCCCTG	GGCCCTGCTG	CCACCCTGGA	GGAGATGATG	ACAGCCTGCC	AGGGGGTGGG
1861	GGGCCCTGGT	CACAAGGCCA	GGGTGCTGGC	TGAGGCCATG	TCCCAGGTGA	CCAACCTCCG
1921	CACCATCATG	ATGCAGAGGG	GCAACTTCAG	GAACCAGAGG	AAGACAGTGA	AGTGCTTCAA
1981	CTGTGGCAAAG	GTGGGCCACA	TTGCCAAGAA	CTGTAGGGCC	CCCAGGAAGA	AGGGCTGCTG
2041	GAAGTGTGGC	AAGGAGGGCC	ACCAGATGAA	GGACTGCAAT	GAGAGGCAGG	CCAACCTCCT
2101	GGGCAAAATC	TGGCCCTCCC	ACAAGGGCAG	GCCTGGCAAC	TTCTTCCAGT	CCAGGCCTGA
2161	GGCCACAGCC	CCTCCCGAGG	AGTCCTTCAG	GTTTGGGGAG	GAGAAGACCA	CCCCAGCCA
2221	GAAGCAGGAG	CCCATTGACA	AGGAGCTGTA	CCCCCTGGCC	TCCCTGAGGT	CCCTGTTTGG
2281	CAACGACCCC	TCCTCCCAGT	AAaataaagc	ccgggcagat	ctgatctgct	gtgccttcta
2341	gttgccagcc	atctgttgtt	tgccctccc	ccgtgccttc	cttgaccttg	gaaggtgcc
2401	ctcccactgt	cctttcctaa	taaaatgagg	aaattgcato	gcattgtctg	agtagggtgc
2461	attctattct	gggggggtggg	gtggggcagc	acagcaaggg	ggaggattgg	gaagacaata
2521	gcaggcatgc	tggggatgcg	gtgggctcta			

SEQ ID NO: 2

FIG. 8

1	ccattgcata	cgttgtatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgcct
181	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggacttttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtac	atcaagtgtg	tcatatgcca	agtacgcccc	ctattgacgt	caatgacggg
361	aaatggcccg	cctggcatta	tgcccagtac	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggcgtggat	agcgggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatgggagg	taggcgtgta	cggtgggagg	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccgggacc	gatccagcct	ccgcgcccg	gaacgggtgca	ttggaacgcg	gattccccgt
781	gccaagagtg	agatctaagt	aagcttcctg	cATGCTGCTG	CTGCTGCTGC	TGCTGGGCCT
841	GAGGCTACAG	CTCTCCCTGG	GCATCATCCC	AGTTGAGGAG	GAGAACCCGG	ACTTCTGGAA
901	CCGCGAGGCA	GCCGAGGCC	TGGGTGCCGC	CAAGAAGCTG	CAGCCTGCAC	AGACAGCCGC
961	CAAGAACCCTC	ATCATCTTCC	TGGGCGATGG	GATGGGGGTG	TCTACGGTGA	CAGCTGCCAG
1021	GATCCTAAAA	GGGCAGAAGA	AGGACAAACT	GGGGCCTGAG	ATACCCCTGG	CCATGGACCG
1081	CTTCCCATAT	GTGGCTCTGT	CCAAGACATA	CAATGTAGAC	AAACATGTGC	CAGACAGTGG
1141	AGCCACAGCC	ACGGCCTACC	TGTGCGGGGT	CAAGGGCAAC	TTCCAGACCA	TTGGCTTGAG
1201	TGCAGCCGCC	CGCTTTAACC	AGTGCAACAC	GACACGCGGC	AACGAGGTCA	TCTCCGTGAT
1261	GAATCGGGCC	AAGAAAGCAG	GGAAGTCAGT	GGGAGTGGTA	ACCACCACAC	GAGTGCAGCA
1321	CGCCTCGCCA	GCCGGCACCT	ACGCCCACAC	GGTGAACCGC	AACTGGTACT	CGGACGCCGA
1381	CGTGCCTGCC	TCCGCCCGCC	AGGAGGGGTG	CCAGGACATC	GCTACGCAGC	TCATCTCCAA
1441	CATGGACATT	GACGTGATCC	TAGGTGGAGG	CCGAAAGTAC	ATGTTTCGCA	TGGGAACCCC
1501	AGACCCTGAG	TACCCAGATG	ACTACAGCCA	AGGTGGGACC	AGGCTGGACG	GGAAGAATCT
1561	GGTGCAGGAA	TGGCTGGCGA	AGCGCCAGGG	TGCCCCGTAT	GTGTGGAACC	GCACTGAGCT
1621	CATGCAGGCT	TCCCTGGACC	CGTCTGTGAC	CCATCTCATG	GGTCTCTTTG	AGCCTGGAGA
1681	CATGAAATAC	GAGATCCACC	GAGACTCCAC	ACTGGACCCC	TCCCTGATGG	AGATGACAGA
1741	GTGTCGCCCTG	CGCCTGCTGA	GCAGGAACCC	CCGCGGCTTC	TTCTCTTCG	TGGAGGGTGG
1801	TCGCATCGAC	CATGGTCATC	ATGAAAGCAG	GGCTTACCGG	GCACTGACTG	AGACGATCAT
1861	GTTTCGACGAC	GCCATTGAGA	GGGCGGGCCA	GCTCACCAGC	GAGGAGGACA	CGCTGAGCCT
1921	CGTCACTGCC	GACCACTCCC	ACGTCTTCTC	CTTCGGAGGC	TACCCCTTGC	GAGGGAGCTC
1981	CATCTTCGGG	CTGGCCCCCTG	GCAAGGCCCG	GGACAGGAAG	GCCTACACGG	TCCTCTTATA
2041	CGGAAACGGT	CCAGGCTATG	TGCTCAAGGA	CGGCGCCCCG	CCGGATGTTA	CCGAGAGCGA
2101	GAGCGGGAGC	CCCGAGTATC	GGCAGCAGTC	AGCAGTGCCC	CTGGACGAAG	AGACCCACGC
2161	AGGCGAGGAC	GTGGCGGTGT	TCGCGCGCGG	CCGCGAGGCG	CACCTGGTTC	ACGGCGTGCA
2221	GGAGCAGACC	TTCATAGCGC	ACGTCTATGG	CTTCGCCGCC	TGCTTGGAGC	CCTACACCGC
2281	CTGCGACCTG	GCGCCCCCGG	CCGGCACACC	CGACGCCGCG	CACCCGGGTT	AAcccggtgt
2341	ccccgcgttg	cttcctctgc	tggccgggac	atcaggtggc	ccccgcgtga	ttggaatcga
2401	tcagaattca	gtcgacgata	tctgatcacg	atctgatctg	ctgtgccttc	tagttgccag
2461	ccatctgttg	tttgcccctc	ccccgtgctt	tccttgacct	tgggaagggtg	cactccact
2521	gtccttttct	aataaaatga	ggaaattgca	tcgcattgtc	tgagtaggtg	tcattctatt
2581	ctgggggggtg	gggtggggca	gcacagcaag	ggggaggatt	gggaagacaa	tagcaggcat
2641	gctgggggatg	cggtgggctc	ta			

FIG. 9

PacI
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|     |             |            |            |            |            |
|-----|-------------|------------|------------|------------|------------|
| 1   | TTCTTAATTA  | ACATCATCAA | TAATATACCT | TATTTTGGAT | TGAAGCCAAT |
|     | AAGAATTAAT  | TGTAGTAGTT | ATTATATGGA | ATAAAACCTA | ACTTCGGTTA |
| 51  | ATGATAATGA  | GGGGGTGGAG | TTTGTGACGT | GGCGCGGGGC | GTGGGAACGG |
|     | TACTATTACT  | CCCCACCTC  | AAACACTGCA | CCGCGCCCCG | CACCTTGCC  |
| 101 | GGCGGGTGAC  | GTAGTAGTGT | GGCGGAAGTG | TGATGTTGCA | AGTGTGGCGG |
|     | CCGCCCACTG  | CATCATCACA | CCGCCTTCAC | ACTACAACGT | TCACACCGCC |
| 151 | AACACATGTA  | AGCGACGGAT | GTGGCAAAAG | TGACGTTTTT | GGTGTGCGCC |
|     | TTGTGTACAT  | TCGCTGCCTA | CACCGTTTTT | ACTGCAAAAA | CCACACGCGG |
| 201 | GGTGTAACACA | GGAAGTGACA | ATTTTCGCGC | GGTTTTAGGC | GGATGTTGTA |
|     | CCACATGTGT  | CCTTCACTGT | TAAAAGCGCG | CCAAAATCCG | CCTACAACAT |
| 251 | GTAAATTTGG  | GCGTAACCGA | GTAAGATTTG | GCCATTTTCG | CGGGAAAACT |
|     | CATTTAAACC  | CGCATTGGCT | CATTCTAAAC | CGGTAAAAGC | GCCCTTTTGA |
| 301 | GAATAAGAGG  | AAGTGAAATC | TGAATAATTT | TGTGTTACTC | ATAGCGCGTA |
|     | CTTATTCTCC  | TTCACTTTAG | ACTTATTAAA | ACACAATGAG | TATCGCGCAT |
| 351 | ATATTTGTCT  | AGGGCCGCGG | GGACTTTGAC | CGTTTACGTG | GAGACTCGCC |
|     | TATAAACAGA  | TCCCGGCGCC | CCTGAAACTG | GCAAATGCAC | CTCTGAGCGG |
| 401 | CAGGTGTTTT  | TCTCAGGTGT | TTTCCGCGTT | CCGGGTCAAA | GTTGGCGTTT |
|     | GTCCACAAA   | AGAGTCCACA | AAAGGCGCAA | GGCCCAGTTT | CAACCGCAAA |
| 451 | TATTATTATA  | GGCGGCCGCG | ATCCATTGCA | TACGTTGTAT | CCATATCATA |
|     | ATAATAATAT  | CCGCCGGCGC | TAGGTAACGT | ATGCAACATA | GGTATAGTAT |
| 501 | ATATGTACAT  | TTATATTGGC | TCATGTCCAA | CATTACCGCC | ATGTTGACAT |
|     | TATACATGTA  | AATATAACCG | AGTACAGGTT | GTAATGGCGG | TACAACTGTA |
| 551 | TGATTATTGA  | CTAGTTATTA | ATAGTAATCA | ATTACGGGGT | CATTAGTTCA |
|     | ACTAATAACT  | GATCAATAAT | TATCATTAGT | TAATGCCCCA | GTAATCAAGT |
| 601 | TAGCCCATAT  | ATGGAGTTCC | GCGTTACATA | ACTTACGGTA | AATGGCCCGC |
|     | ATCGGGTATA  | TACCTCAAGG | CGCAATGTAT | TGAATGCCAT | TTACCGGGCG |
| 651 | CTGGCTGACC  | GCCCAACGAC | CCCCGCCCAT | TGACGTCAAT | AATGACGTAT |
|     | GACCGACTGG  | CGGGTTGCTG | GGGGCGGGTA | ACTGCAGTTA | TTACTGCATA |
| 701 | GTTCCCATAG  | TAACGCCAAT | AGGGACTTTC | CATTGACGTC | AATGGGTGGA |
|     | CAAGGGTATC  | ATTGCGGTTA | TCCCTGAAAG | GTAAGTGCAG | TTACCCACCT |
| 751 | GTATTTACGG  | TAAACTGCCC | ACTTGGCAGT | ACATCAAGTG | TATCATATGC |
|     | CATAAATGCC  | ATTTGACGGG | TGAACCGTCA | TGTAGTTCAC | ATAGTATACG |

FIG. 10A-1

|      |             |             |             |            |            |
|------|-------------|-------------|-------------|------------|------------|
| 801  | CAAGTACGCC  | CCCTATTGAC  | GTCAATGACG  | GTAAATGGCC | CGCCTGGCAT |
|      | GTTTCATGCGG | GGGATAACTG  | CAGTTACTGC  | CATTTACCGG | GCGGACCGTA |
| 851  | TATGCCCAGT  | ACATGACCTT  | ATGGGACTTT  | CCTACTTGGC | AGTACATCTA |
|      | ATACGGGTCA  | TGTACTGGAA  | TACCCTGAAA  | GGATGAACCG | TCATGTAGAT |
| 901  | CGTATTAGTC  | ATCGCTATTA  | CCATGGTGAT  | GCGGTTTTTG | CAGTACATCA |
|      | GCATAATCAG  | TAGCGATAAT  | GGTACCACTA  | CGCCAAAACC | GTCATGTAGT |
| 951  | ATGGGCGTGG  | ATAGCGGTTT  | GACTCACGGG  | GATTTCCAAG | TCTCCACCCC |
|      | TACCCGCACC  | TATCGCCAAA  | CTGAGTGCCC  | CTAAAGGTTC | AGAGGTGGGG |
| 1001 | ATTGACGTCA  | ATGGGAGTTT  | GTTTTGGCAC  | CAAAATCAAC | GGGACTTTCC |
|      | TAACCTGCAGT | TACCCTCAAA  | CAAACCGTG   | GTTTTAGTTG | CCCTGAAAGG |
| 1051 | AAAATGTCGT  | AACAACCTCCG | CCCCATTGAC  | GCAAATGGGC | GGTAGGCGTG |
|      | TTTTACAGCA  | TTGTTGAGGC  | GGGGTAACTG  | CGTTTACCCG | CCATCCGCAC |
| 1101 | TACGGTGGGA  | GGTCTATATA  | AGCAGAGCTC  | GTTTAGTGAA | CCGTCAGATC |
|      | ATGCCACCCT  | CCAGATATAT  | TCGTCTCGAG  | CAAATCACTT | GGCAGTCTAG |
| 1151 | GCCTGGAGAC  | GCCATCCACG  | CTGTTTTGAC  | CTCCATAGAA | GACACCGGGA |
|      | CGGACCTCTG  | CGGTAGGTGC  | GACAAAACCTG | GAGGTATCTT | CTGTGGCCCT |
| 1201 | CCGATCCAGC  | CTCCGCGGCC  | GGGAACGGTG  | CATTGGAACG | CGGATTCCCC |
|      | GGCTAGGTCG  | GAGGCGCCGG  | CCCTTGCCAC  | GTAACCTTGC | GCCTAAGGGG |
| 1251 | GTGCCAAGAG  | TGAGATCTAC  | CATGGGTGCT  | AGGGCTTCTG | TGCTGTCTGG |
|      | CACGGTTCTC  | ACTCTAGATG  | GTACCACAGA  | TCCCGAAGAC | ACGACAGACC |
| 1301 | TGGTGAGCTG  | GACAAGTGGG  | AGAAGATCAG  | GCTGAGGCCT | GGTGGCAAGA |
|      | ACCACTCGAC  | CTGTTACACC  | TCTTCTAGTC  | CGACTCCGGA | CCACCGTTCT |
| 1351 | AGAAGTACAA  | GCTAAAGCAC  | ATTGTGTGGG  | CCTCCAGGGA | GCTGGAGAGG |
|      | TCTTCATGTT  | CGATTTCTGT  | TAACACACCC  | GGAGGTCCCT | CGACCTCTCC |
| 1401 | TTTGCTGTGA  | ACCCTGGCCT  | GCTGGAGACC  | TCTGAGGGGT | GCAGGCAGAT |
|      | AAACGACACT  | TGGGACCGGA  | CGACCTCTGG  | AGACTCCCCA | CGTCCGTCTA |
| 1451 | CCTGGGCCAG  | CTCCAGCCCT  | CCCTGCAAAC  | AGGCTCTGAG | GAGCTGAGGT |
|      | GGACCCGGTC  | GAGGTCGGGA  | GGGACGTTTG  | TCCGAGACTC | CTCGACTCCA |
| 1501 | CCCTGTACAA  | CACAGTGGCT  | ACCCTGTACT  | GTGTGCACCA | GAAGATTGAT |
|      | GGGACATGTT  | GTGTCACCGA  | TGGGACATGA  | CACACGTGGT | CTTCTAACTA |
| 1551 | GTGAAGGACA  | CCAAGGAGGC  | CCTGGAGAAG  | ATTGAGGAGG | AGCAGAACAA |
|      | CACTTCCTGT  | GGTTCCTCCG  | GGACCTCTTC  | TAACCTCCTC | TCGTCTTGTT |

FIG. 10A-2

|      |             |             |            |            |            |
|------|-------------|-------------|------------|------------|------------|
| 1601 | GTCCAAGAAG  | AAGGCCCAGC  | AGGCTGCTGC | TGGCACAGGC | AACTCCAGCC |
|      | CAGGTTCTTC  | TTCCGGGTCG  | TCCGACGACG | ACCGTGTCCG | TTGAGGTCGG |
| 1651 | AGGTGTCCCA  | GAACTACCCC  | ATTGTGCAGA | ACCTCCAGGG | CCAGATGGTG |
|      | TCCACAGGGT  | CTTGATGGGG  | TAACACGTCT | TGGAGGTCCC | GGTCTACCAC |
| 1701 | CACCAGGCCA  | TCTCCCCCCG  | GACCCTGAAT | GCCTGGGTGA | AGGTGGTGGA |
|      | GTGGTCCGGT  | AGAGGGGGGC  | CTGGGACTTA | CGGACCCACT | TCCACCACCT |
| 1751 | GGAGAAGGCC  | TTCTCCCCTG  | AGGTGATCCC | CATGTTCTCT | GCCCTGTCTG |
|      | CCTCTTCCGG  | AAGAGGGGAC  | TCCACTAGGG | GTACAAGAGA | CGGGACAGAC |
| 1801 | AGGGTGCCAC  | CCCCCAGGAC  | CTGAACACCA | TGCTGAACAC | AGTGGGGGGC |
|      | TCCCACGGTG  | GGGGGTCCCTG | GACTTGTGGT | ACGACTTGTG | TCACCCCCCG |
| 1851 | CATCAGGCTG  | CCATGCAGAT  | GCTGAAGGAG | ACCATCAATG | AGGAGGCTGC |
|      | GTAGTCCGAC  | GGTACGTCTA  | CGACTTCCTC | TGGTAGTTAC | TCCTCCGACG |
| 1901 | TGAGTGGGAC  | AGGCTGCATC  | CTGTGCACGC | TGGCCCCATT | GCCCCCGGCC |
|      | ACTCACCCCTG | TCCGACGTAG  | GACACGTGCG | ACCGGGGTAA | CGGGGGCCGG |
| 1951 | AGATGAGGGA  | GCCCAGGGGC  | TCTGACATTG | CTGGCACCAC | CTCCACCCTC |
|      | TCTACTCCCT  | CGGGTCCCCG  | AGACTGTAAC | GACCGTGGTG | GAGGTGGGAG |
| 2001 | CAGGAGCAGA  | TTGGCTGGAT  | GACCAACAAC | CCCCCATCC  | CTGTGGGGGA |
|      | GTCCTCGTCT  | AACCGACCTA  | CTGGTTGTTG | GGGGGGTAGG | GACACCCCCT |
| 2051 | AATCTACAAG  | AGGTGGATCA  | TCCTGGGCCT | GAACAAGATT | GTGAGGATGT |
|      | TTAGATGTTT  | TCCACCTAGT  | AGGACCCGGA | CTTGTTCTAA | CACTCCTACA |
| 2101 | ACTCCCCCAC  | CTCCATCCTG  | GACATCAGGC | AGGGCCCCAA | GGAGCCCTTC |
|      | TGAGGGGGTG  | GAGGTAGGAC  | CTGTAGTCCG | TCCCGGGGTT | CCTCGGGAAG |
| 2151 | AGGGACTATG  | TGGACAGGTT  | CTACAAGACC | CTGAGGGCTG | AGCAGGCCTC |
|      | TCCCTGATAC  | ACCTGTCCAA  | GATGTTCTGG | GACTCCCGAC | TCGTCCGGAG |
| 2201 | CCAGGAGGTG  | AAGAACTGGA  | TGACAGAGAC | CCTGCTGGTG | CAGAATGCCA |
|      | GGTCCTCCAC  | TTCTTGACCT  | ACTGTCTCTG | GGACGACCAC | GTCTTACGGT |
| 2251 | ACCCTGACTG  | CAAGACCATC  | CTGAAGGCC  | TGGGCCCTGC | TGCCACCCTG |
|      | TGGGACTGAC  | GTTCTGGTAG  | GACTTCCGGG | ACCGGGGACG | ACGGTGGGAC |
| 2301 | GAGGAGATGA  | TGACAGCCTG  | CCAGGGGGTG | GGGGGCCCTG | GTCACAAGGC |
|      | CTCCTCTACT  | ACTGTCGGAC  | GGTCCCCCAC | CCCCCGGGAC | CAGTGTTCCG |
| 2351 | CAGGGTGCTG  | GCTGAGGCCA  | TGTCCCAGGT | GACCAACTCC | GCCACCATCA |
|      | GTCCCACGAC  | CGACTCCGGT  | ACAGGGTCCA | CTGGTTGAGG | CGGTGGTAGT |

FIG. 10A-3

|      |                           |                          |                          |                          |                          |
|------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2401 | TGATGCAGAG<br>ACTACGTCTC  | GGGCAACTTC<br>CCCGTTGAAG | AGGAACCAGA<br>TCCTTGGTCT | GGAAGACAGT<br>CCTTCTGTCA | GAAGTGCTTC<br>CTTCACGAAG |
| 2451 | AACTGTGGCA<br>TTGACACCGT  | AGGTGGGCCA<br>TCCACCCGGT | CATTGCCAAG<br>GTAACGGTTC | AACTGTAGGG<br>TTGACATCCC | CCCCCAGGAA<br>GGGGGTCTTT |
| 2501 | GAAGGGCTGC<br>CTTCCCACG   | TGGAAGTGTG<br>ACCTTCACAC | GCAAGGAGGG<br>CGTTCCTCCC | CCACCAGATG<br>GGTGGTCTAC | AAGGACTGCA<br>TTCTTGACGT |
| 2551 | ATGAGAGGCA<br>TACTCTCCGT  | GGCCAACTTC<br>CCGGTTGAAG | CTGGGCAAAA<br>GACCCGTTTT | TCTGGCCCTC<br>AGACCGGGAG | CCACAAGGGC<br>GGTGTTCCCG |
| 2601 | AGGCCTGGCA<br>TCCGGACCGT  | ACTTCCTCCA<br>TGAAGGAGGT | GTCCAGGCCT<br>CAGGTCCGGA | GAGCCCACAG<br>CTCGGGTGTC | CCCCTCCCGA<br>GGGGAGGGCT |
| 2651 | GGAGTCCTTC<br>CCTCAGGAAG  | AGGTTTGGGG<br>TCCAAACCCC | AGGAGAAGAC<br>TCCTCTTCTG | CACCCCCAGC<br>GTGGGGGTGC | CAGAAGCAGG<br>GTCTTCGTCC |
| 2701 | AGCCCATTTGA<br>TCGGGTAACT | CAAGGAGCTG<br>GTTCTCTGAC | TACCCCCTGG<br>ATGGGGGACC | CCTCCCTGAG<br>GGAGGGACTC | GTCCCTGTTT<br>CAGGGACAAA |
| 2751 | GGCAACGACC<br>CCGTTGCTGG  | CCTCCTCCCA<br>GGAGGAGGGT | GTAATAATAA<br>CATTTTATTT | GCCCGGGCAG<br>CGGGCCCGTC | ATCTGCTGTG<br>TAGACGACAC |
| 2801 | CCTTCTAGTT<br>GGAAGATCAA  | GCCAGCCATC<br>CGGTCGGTAG | TGTTGTTTGC<br>ACAACAAACG | CCCTCCCCCG<br>GGGAGGGGGC | TGCCTTCCTT<br>ACGGAAGGAA |
| 2851 | GACCCTGGAA<br>CTGGGACCTT  | GGTGCCACTC<br>CCACGGTGAG | CCACTGTCTT<br>GGTGACAGGA | TTCTTAATAA<br>AAGGATTATT | AATGAGGAAA<br>TTACTCCTTT |
| 2901 | TTGCATCGCA<br>AACGTAGCGT  | TTGTCTGAGT<br>AACAGACTCA | AGGTGTCATT<br>TCCACAGTAA | CTATTCTGGG<br>GATAAGACCC | GGGTGGGGTG<br>CCCACCCAC  |
| 2951 | GGGCAGGACA<br>CCCGTCCTGT  | GCAAGGGGGA<br>CGTTCCCCCT | GGATTGGGAA<br>CCTAACCTTT | GACAATAGCA<br>CTGTTATCGT | GGCATGCTGG<br>CCGTACGACC |
| 3001 | GGATGCGGTG<br>CCTACGCCAC  | GGCTCTATGG<br>CCGAGATACC | CCGATCGGCG<br>GGCTAGCCGC | CGCCGTACTG<br>GCGGCATGAC | AAATGTGTGG<br>TTTACACACC |
| 3051 | GCGTGGCTTA<br>CGCACC GAAT | AGGGTGGGAA<br>TCCCACCCTT | AGAATATATA<br>TCTTATATAT | AGGTGGGGGT<br>TCCACCCCCA | CTTATGTAGT<br>GAATACATCA |
| 3101 | TTTGTATCTG<br>AAACATAGAC  | TTTTGCAGCA<br>AAAACGTCGT | GCCGCCGCCG<br>CGGCGGCGGC | CCATGAGCAC<br>GGTACTCGTG | CAACTCGTTT<br>GTTGAGCAAA |
| 3151 | GATGGAAGCA<br>CTACCTTCGT  | TTGTGAGCTC<br>AACACTCGAG | ATATTTGACA<br>TATAAACTGT | ACGCGCATGC<br>TGCGCGTACG | CCCCATGGGC<br>GGGGTACCCG |

FIG. 10A-4

|      |                          |                          |                          |                           |                            |
|------|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|
| 3201 | CGGGGTGCGT<br>GCCCCACGCA | CAGAATGTGA<br>GTCTTACACT | TGGGCTCCAG<br>ACCCGAGGTC | CATTGATGGT<br>GTAAC TACCA | CGCCCCGTCC<br>GCGGGGCAGG   |
| 3251 | TGCCCCGAAA<br>ACGGGCGTTT | CTCTACTACC<br>GAGATGATGG | TTGACCTACG<br>AACTGGATGC | AGACCGTGTC<br>TCTGGCACAG  | TGGAACGCCG<br>ACCTTGCGGC   |
| 3301 | TTGGAGACTG<br>AACCTCTGAC | CAGCCTCCGC<br>GTCGGAGGCG | CGCCGCTTCA<br>GCGGCGAAGT | GCCGCTGCAG<br>CGGCGACGTC  | CCACCGCCCCG<br>GGTGGCGGGC  |
| 3351 | CGGGATTGTG<br>GCCCTAACAC | ACTGACTTTG<br>TGACTGAAAC | CTTTCCTGAG<br>GAAAGGACTC | CCCGCTTGCA<br>GGGCGAACGT  | AACAGTGCAG<br>TTGTCACGTC   |
| 3401 | CTTCCCGTTC<br>GAAGGGCAAG | ATCCGCCCGC<br>TAGGCGGGCG | GATGACAAGT<br>CTACTGTTCA | TGACGGCTCT<br>ACTGCCGAGA  | TTTGGCACAA<br>AAACCGTGTT   |
| 3451 | TTGGATTCTT<br>AACCTAAGAA | TGACCCGGGA<br>ACTGGGCCCT | ACTTAATGTC<br>TGAATTACAG | GTTTCTCAGC<br>CAAAGAGTCG  | AGCTGTTGGA<br>TCGACAACCT   |
| 3501 | TCTGCGCCAG<br>AGACGCGGTC | CAGGTTTCTG<br>GTCCAAAGAC | CCCTGAAGGC<br>GGGACTTCCG | TTCCTCCCCT<br>AAGGAGGGGA  | CCCAATGCGG<br>GGGTACGCC    |
| 3551 | TTTAAAACAT<br>AAATTTTGTA | AAATAAAAAA<br>TTTATTTTTT | CCAGACTCTG<br>GGTCTGAGAC | TTTGGATTTG<br>AAACCTAAAC  | GATCAAGCAA<br>CTAGTTCGTT   |
| 3601 | GTGTCTTGCT<br>CACAGAACGA | GTCTTTATTT<br>CAGAAATAAA | AGGGGTTTTG<br>TCCCCAAAAC | CGCGCGCGGT<br>GCGCGCGCCA  | AGGCCCGGGA<br>TCCGGGCCCT   |
| 3651 | CCAGCGGTCT<br>GGTCGCCAGA | CGGTCGTTGA<br>GCCAGCAACT | GGGTCCGTGT<br>CCCAGGACAC | TATTTTTTCC<br>ATAAAAAAGG  | AGGACGTGGT<br>TCCTGCACCA   |
| 3701 | AAAGGTGACT<br>TTTCCACTGA | CTGGATGTTT<br>GACCTACAAG | AGATACATGG<br>TCTATGTACC | GCATAAGCCC<br>CGTATTCGGG  | GTCTCTGGGG<br>CAGAGACCCC   |
| 3751 | TGGAGGTAGC<br>ACCTCCATCG | ACCACTGCAG<br>TGGTGACGTC | AGCTTCATGC<br>TCGAAGTACG | TGCGGGGTGG<br>ACGCCCCACC  | TGTTGTAGAT<br>ACAACATCTA   |
| 3801 | GATCCAGTCG<br>CTAGGTCAGC | TAGCAGGAGC<br>ATCGTCCTCG | GCTGGGCGTG<br>CGACCCGCAC | GTGCCTAAAA<br>CACGGATTTT  | ATGTC TTTC A<br>TACAGAAAGT |
| 3851 | GTAGCAAGCT<br>CATCGTTCGA | GATTGCCAGG<br>CTAACGGTCC | GGCAGGCCCT<br>CCGTCCGGGA | TGGTGTAAGT<br>ACCACATTCA  | GTTTACAAAG<br>CAAATGTTTC   |
| 3901 | CGGTTAAGCT<br>GCCAATTCGA | GGGATGGGTG<br>CCCTACCCAC | CATACGTGGG<br>GTATGCACCC | GATATGAGAT<br>CTATACTCTA  | GCATCTTGGA<br>CGTAGAACCT   |
| 3951 | CTGTATTTTT<br>GACATAAAAA | AGGTTGGCTA<br>TCCAACCGAT | TGTTCCCAGC<br>ACAAGGGTCG | CATATCCCTC<br>GTATAGGGAG  | CGGGGATTCA<br>GCCCCTAAGT   |

FIG. 10A-5

|      |                           |                           |                           |                           |                           |
|------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 4001 | TGTTGTGCAG<br>ACAACACGTC  | AACCACCAGC<br>TTGGTGGTCG  | ACAGTGTATC<br>TGTCACATAG  | CGGTGCACTT<br>GCCACGTGAA  | GGGAAATTTG<br>CCCTTTAAAC  |
| 4051 | TCATGTAGCT<br>AGTACATCGA  | TAGAAGGAAA<br>ATCTTCCTTT  | TGCGTGGAAG<br>ACGCACCTTC  | AACTTGGAGA<br>TTGAACCTCT  | CGCCCTTG TG<br>GCGGGAACAC |
| 4101 | ACCTCCAAGA<br>TGGAGGTTCT  | TTTTCCATGC<br>AAAAGGTACG  | ATTCGTCCAT<br>TAAGCAGGTA  | AATGATGGCA<br>TTACTACCGT  | ATGGGCCCAC<br>TACCCGGGTG  |
| 4151 | GGGCGGCGGC<br>CCCGCCGCCG  | CTGGGCGAAG<br>GACCCGCTTC  | ATATTTCTGG<br>TATAAAGACC  | GATCACTAAC<br>CTAGTGATTG  | GTCATAGTTG<br>CAGTATCAAC  |
| 4201 | TGTTCCAGGA<br>ACAAGGTCCT  | TGAGATCGTC<br>ACTCTAGCAG  | ATAGGCCATT<br>TATCCGGTAA  | TTTACAAAGC<br>AAATGTTTCG  | GCGGGCGGAG<br>CGCCCGCCTC  |
| 4251 | GGTGCCAGAC<br>CCACGGTCTG  | TGCGGTATAA<br>ACGCCATATT  | TGGTTCCATC<br>ACCAAGGTAG  | CGGCCCAGGG<br>GCCGGGTCCC  | GCGTAGTTAC<br>CGCATCAATG  |
| 4301 | CCTCACAGAT<br>GGAGTGCTTA  | TTGCATTTCC<br>AACGTAAAGG  | CACGCTTTGA<br>GTGCGAAACT  | G TTCAGATGG<br>CAAGTCTACC | GGGGATCATG<br>CCCCTAGTAC  |
| 4351 | TCTACCTGCG<br>AGATGGACGC  | GGGCGATGAA<br>CCCGCTACTT  | GAAAACGGTT<br>CTTTTGCCAA  | TCCGGGGTAG<br>AGGCCCCATC  | GGGAGATCAG<br>CCCTCTAGTC  |
| 4401 | CTGGGAAGAA<br>GACCCTTCTT  | AGCAGGTTCC<br>TCGTCCAAGG  | TGAGCAGCTG<br>ACTCGTCGAC  | CGACTTACCG<br>GCTGAATGGC  | CAGCCGGTGG<br>GTCGGCCACC  |
| 4451 | GCCCGTAAAT<br>CGGGCATT TA | CACACCTATT<br>GTGTGGATAA  | ACCGGCTGCA<br>TGGCCGACGT  | ACTGGTAGTT<br>TGACCATCAA  | AAGAGAGCTG<br>TTCTCTCGAC  |
| 4501 | CAGCTGCCGT<br>GTCGACGGCA  | CATCCCTGAG<br>GTAGGGACTC  | CAGGGGGGCC<br>GTCCCCCGG   | ACTTCGT TAA<br>TGAAGCAATT | GCATGTCCCT<br>CGTACAGGGA  |
| 4551 | GACTCGCATG<br>CTGAGCGTAC  | TTTTCCCTGA<br>AAAAGGGACT  | CCAAATCCGC<br>GGTTTAGGCG  | CAGAAGGCGC<br>GTCTTCCGCG  | TCGCCGCCCA<br>AGCGGCGGGT  |
| 4601 | GCGATAGCAG<br>CGCTATCGTC  | TTCTTGCAAG<br>AAGAACG TTC | GAAGCAAAGT<br>CTTCGTTTCA  | TTTTCAACGG<br>AAAAGTTGCC  | TTTGAGACCG<br>AAACTCTGGC  |
| 4651 | TCCGCCGTAG<br>AGGCGGCATC  | GCATGCTTTT<br>CGTACGAAAA  | GAGCGTTTGA<br>CTCGCAA ACT | CCAAGCAGTT<br>GGTTCGTCAA  | CCAGGCGGTC<br>GGTCCGCCAG  |
| 4701 | CCACAGCTCG<br>GGTGTGAGC   | GTCACCTGCT<br>CAGTGGACGA  | CTACGGCATC<br>GATGCCGTAG  | TCGATCCAGC<br>AGCTAGGTCTG | ATATCTCCTC<br>TATAGAGGAG  |
| 4751 | GTTTCGCGGG<br>CAAAGCGCCC  | TTGGGGCGGC<br>AACCCCGCCG  | TTTCGCTGTA<br>AAAGCGACAT  | CGGCAGTAGT<br>GCCGTCATCA  | CGGTGCTCGT<br>GCCACGAGCA  |

FIG. 10A-6

|      |                          |                           |                          |                          |                           |
|------|--------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 4801 | CCAGACGGGC<br>GGTCTGCCCC | CAGGGTCATG<br>GTCCCAGTAC  | TCTTTCCACG<br>AGAAAGGTGC | GGCGCAGGGT<br>CCGCGTCCCA | CCTCGTCAGC<br>GGAGCAGTCG  |
| 4851 | GTAGTCTGGG<br>CATCAGACCC | TCACGGTGAA<br>AGTGCCACTT  | GGGGTGCGCT<br>CCCCACGCGA | CCGGGCTGCG<br>GGCCCGACGC | CGCTGGCCAG<br>GCGACCGGTC  |
| 4901 | GGTGCGCTTG<br>CCACGCGAAC | AGGCTGGTCC<br>TCCGACCAGG  | TGCTGGTGCT<br>ACGACCACGA | GAAGCGCTGC<br>CTTCGCGACG | CGGTCTTTCGC<br>GCCAGAAGCG |
| 4951 | CCTGCGCGTC<br>GGACGCGCAG | GGCCAGGTAG<br>CCGGTCCATC  | CATTTGACCA<br>GTAAACTGGT | TGGTGTCATA<br>ACCACAGTAT | GTCCAGCCCC<br>CAGGTCGGGG  |
| 5001 | TCCGCGGCGT<br>AGGCGCCGCA | GGCCCTTGGC<br>CCGGAACCG   | GCGCAGCTTG<br>CGCGTCGAAC | CCCTTGAGG<br>GGGAACCTCC  | AGGCGCCGCA<br>TCCGCGGCGT  |
| 5051 | CGAGGGGCAG<br>GCTCCCCGTC | TGCAGACTTT<br>ACGTCTGAAA  | TGAGGGCGTA<br>ACTCCGCGAT | GAGCTTGGGC<br>CTCGAACCCG | GCGAGAAATA<br>CGCTCTTTAT  |
| 5101 | CCGATTCCGG<br>GGCTAAGGCC | GGAGTAGGCA<br>CCTCATCCGT  | TCCGCGCCGC<br>AGGCGCGGCG | AGGCCCCGCA<br>TCCGGGGCGT | GACGGTCTCG<br>CTGCCAGAGC  |
| 5151 | CATTCCACGA<br>GTAAGGTGCT | GCCAGGTGAG<br>CGGTCCACTC  | CTCTGGCCGT<br>GAGACCGGCA | TCGGGGTCAA<br>AGCCCCAGTT | AAACCAGGTT<br>TTTGGTCCAA  |
| 5201 | TCCCCCATGC<br>AGGGGGTACG | TTTTTGATGC<br>AAAAACTACG  | GTTTCTTACC<br>CAAAGAATGG | TCTGGTTTCC<br>AGACCAAAGG | ATGAGCCGGT<br>TACTCGGCCA  |
| 5251 | GTCCACGCTC<br>CAGGTGCGAG | GGTGACGAAA<br>CCACTGCTTT  | AGGCTGTCCG<br>TCCGACAGGC | TGTCCCCGTA<br>ACAGGGGCAT | TACAGACTTG<br>ATGTCTGAAC  |
| 5301 | AGAGGCCTGT<br>TCTCCGGACA | CCTCGAGCGG<br>GGAGCTCGCC  | TGTTCCGCGG<br>ACAAGGCGCC | TCCTCCTCGT<br>AGGAGGAGCA | ATAGAAACTC<br>TATCTTTGAG  |
| 5351 | GGACCACTCT<br>CCTGGTGAGA | GAGACAAAGG<br>CTCTGTTTCC  | CTCGCGTCCA<br>GAGCGCAGGT | GGCCAGCACG<br>CCGGTCGTGC | AAGGAGGCTA<br>TTCTTCCGAT  |
| 5401 | AGTGGGAGGG<br>TCACCCTCCC | GTAGCGGTCTG<br>CATCGCCAGC | TTGTCCACTA<br>AACAGGTGAT | GGGGGTCCAC<br>CCCCCAGGTG | TCGCTCCAGG<br>AGCGAGGTCC  |
| 5451 | GTGTGAAGAC<br>CACACTTCTG | ACATGTCTGCC<br>TGTACAGCGG | CTCTTCGGCA<br>GAGAAGCCGT | TCAAGGAAGG<br>AGTTCCTTCC | TGATTGGTTT<br>ACTAACCAAA  |
| 5501 | GTAGGTGTAG<br>CATCCACATC | GCCACGTGAC<br>CGGTGCACTG  | CGGGTGTTCC<br>GCCACAAGG  | TGAAGGGGGG<br>ACTTCCCCCC | CTATAAAAGG<br>GATATTTTCC  |
| 5551 | GGGTGGGGGC<br>CCCACCCCCG | GCGTTCGTCC<br>CGCAAGCAGG  | TCACTCTCTT<br>AGTGAGAGAA | CCGCATCGCT<br>GGCGTAGCGA | GTCTGCGAGG<br>CAGACGCTCC  |

FIG. 10A-7



|      |            |            |            |            |            |
|------|------------|------------|------------|------------|------------|
| 5601 | GCCAGCTGTT | GGGGTGAGTA | CTCCCTCTGA | AAAGCGGGCA | TGACTTCTGC |
|      | CGGTGACAA  | CCCCACTCAT | GAGGGAGACT | TTTCGCCCCG | ACTGAAGACG |
| 5651 | GCTAAGATTG | TCAGTTTCCA | AAAACGAGGA | GGATTTGATA | TTCACCTGGC |
|      | CGATTCTAAC | AGTCAAAGGT | TTTTGCTCCT | CCTAAACTAT | AAGTGGACCG |
| 5701 | CCGCGGTGAT | GCCTTTGAGG | GTGGCCGCAT | CCATCTGGTC | AGAAAAGACA |
|      | GGCGCCACTA | CGGAAACTCC | CACCGGCGTA | GGTAGACCAG | TCTTTTCTGT |
| 5751 | ATCTTTTTGT | TGTCAAGCTT | GGTGGCAAAC | GACCCGTAGA | GGGCGTTGGA |
|      | TAGAAAAACA | ACAGTTCGAA | CCACCGTTTG | CTGGGCATCT | CCCGCAACCT |
| 5801 | CAGCAACTTG | GCGATGGAGC | GCAGGGTTTG | GTTTTTGTCG | CGATCGGCGC |
|      | GTCGTTGAAC | CGCTACCTCG | CGTCCCAAAC | CAAAAACAGC | GCTAGCCGCG |
| 5851 | GCTCCTTGGC | CGCGATGTTT | AGCTGCACGT | ATTCGCGCGC | AACGCACCGC |
|      | CGAGGAACCG | GCGCTACAAA | TCGACGTGCA | TAAGCGCGCG | TTGCGTGGCG |
| 5901 | CATTCGGGAA | AGACGGTGGT | GCGCTCGTCG | GGCACCAGGT | GCACGCGCCA |
|      | GTAAGCCCTT | TCTGCCACCA | CGCGAGCAGC | CCGTGGTCCA | CGTGCGCGGT |
| 5951 | ACCGCGGTTG | TGCAGGGTGA | CAAGGTCAAC | GCTGGTGGCT | ACCTCTCCGC |
|      | TGGCGCCAAC | ACGTCCCCT  | GTTCCAGTTG | CGACCACCGA | TGGAGAGGCG |
| 6001 | GTAGGCGCTC | GTTGGTCCAG | CAGAGGCGGC | CGCCCTTGCG | CGAGCAGAAT |
|      | CATCCGCGAG | CAACCAGGTC | GTCTCCGCCG | GCGGGAACGC | GCTCGTCTTA |
| 6051 | GGCGGTAGGG | GGTCTAGCTG | CGTCTCGTCC | GGGGGGTCTG | CGTCCACGGT |
|      | CCGCCATCCC | CCAGATCGAC | GCAGAGCAGG | CCCCCAGAC  | GCAGGTGCCA |
| 6101 | AAAGACCCCG | GGCAGCAGGC | GCGCGTCGAA | GTAGTCTATC | TTGCATCCTT |
|      | TTTCTGGGGC | CCGTCGTCCG | CGCGCAGCTT | CATCAGATAG | AACGTAGGAA |
| 6151 | GCAAGTCTAG | CGCCTGCTGC | CATGCGCGGG | CGGCAAGCGC | GCGCTCGTAT |
|      | CGTTCAGATC | GCGGACGACG | GTACGCGCCC | GCCGTTCGCG | CGCGAGCATA |
| 6201 | GGGTTGAGTG | GGGGACCCCA | TGGCATGGGG | TGGGTGAGCG | CGGAGGCGTA |
|      | CCCAACTCAC | CCCCTGGGGT | ACCGTACCCC | ACCCACTCGC | GCCTCCGCAT |
| 6251 | CATGCCGCAA | ATGTCGTAAA | CGTAGAGGGG | CTCTCTGAGT | ATTCCAAGAT |
|      | GTACGGCGTT | TACAGCATTT | GCATCTCCCC | GAGAGACTCA | TAAGGTTCTA |
| 6301 | ATGTAGGGTA | GCATCTTCCA | CCGCGGATGC | TGGCGCGCAC | GTAATCGTAT |
|      | TACATCCCAT | CGTAGAAGGT | GGCGCCTACG | ACCGCGCGTG | CATTAGCATA |
| 6351 | AGTTCGTGCG | AGGGAGCGAG | GAGGTCGGGA | CCGAGGTTGC | TACGGGCGGG |
|      | TCAAGCACGC | TCCCTCGCTC | CTCCAGCCCT | GGCTCCAACG | ATGCCCGCCC |

FIG. 10A-8

|      |                          |                          |                           |                          |                          |
|------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| 6401 | CTGCTCTGCT<br>GACGAGACGA | CGGAAGACTA<br>GCCTTCTGAT | TCTGCCTGAA<br>AGACGGACTT  | GATGGCATGT<br>CTACCGTACA | GAGTTGGATG<br>CTCAACCTAC |
| 6451 | ATATGGTTGG<br>TATACCAACC | ACGCTGGAAG<br>TGCGACCTTC | ACGTTGAAGC<br>TGCAACTTCG  | TGGCGTCTGT<br>ACCGCAGACA | GAGACCTACC<br>CTCTGGATGG |
| 6501 | GCGTCACGCA<br>CGCAGTGCCT | CGAAGGAGGC<br>GCTTCCTCCG | GTAGGAGTCG<br>CATCCTCAGC  | CGCAGCTTGT<br>GCGTCGAACA | TGACCAGCTC<br>ACTGGTCGAG |
| 6551 | GGCGGTGACC<br>CCGCCACTGG | TGCACGTCTA<br>ACGTGCAGAT | GGGCGCAGTA<br>CCCGCGTCAT  | GTCCAGGGTT<br>CAGGTCCCAA | TCCTTGATGA<br>AGGAACTACT |
| 6601 | TGTCATACTT<br>ACAGTATGAA | ATCCTGTCCC<br>TAGGACAGGG | TTTTTTTTTCC<br>AAAAAAAAGG | ACAGCTCGCG<br>TGTCGAGCGC | GTTGAGGACA<br>CAACTCCTGT |
| 6651 | AACTCTTCGC<br>TTGAGAAGCG | GGTCTTTCCA<br>CCAGAAAGGT | GTA CTCTTGG<br>CATGAGAACC | ATCGGAAACC<br>TAGCCTTTGG | CGTCGGCCTC<br>GCAGCCGGAG |
| 6701 | CGAACGGTAA<br>GCTTGCCATT | GAGCCTAGCA<br>CTCGGATCGT | TGTAGAACTG<br>ACATCTTGAC  | GTTGACGGCC<br>CAACTGCCGG | TGGTAGGCGC<br>ACCATCCGCG |
| 6751 | AGCATCCCTT<br>TCGTAGGGAA | TTCTACGGGT<br>AAGATGCCCA | AGCGCGTATG<br>TCGCGCATAC  | CCTGCGCGGC<br>GGACGCGCCG | CTTCCGGAGC<br>GAAGGCCTCG |
| 6801 | GAGGTGTGGG<br>CTCCACACCC | TGAGCGCAAA<br>ACTCGCGTTT | GGTGTCCCTG<br>CCACAGGGAC  | ACCATGACTT<br>TGGTACTGAA | TGAGGTACTG<br>ACTCCATGAC |
| 6851 | GTATTTGAAG<br>CATAAACTTC | TCAGTGTCTG<br>AGTCACAGCA | CGCATCCGCC<br>GCGTAGGCGG  | CTGCTCCAG<br>GACGAGGGTC  | AGCAAAAAGT<br>TCGTTTTTCA |
| 6901 | CCGTGCGCTT<br>GGCACGCGAA | TTTGGAACGC<br>AAACCTTGCG | GGATTTGGCA<br>CCTAAACCGT  | GGGCGAAGGT<br>CCCGCTTCCA | GACATCGTTG<br>CTGTAGCAAC |
| 6951 | AAGAGTATCT<br>TTCTCATAGA | TTCCCGCGCG<br>AAGGGCGCGC | AGGCATAAAG<br>TCCGTATTTT  | TTGCGTGTGA<br>AACGCACACT | TGCGGAAGGG<br>ACGCCTTCCC |
| 7001 | TCCCGGCACC<br>AGGGCCGTGG | TCGGAACGGT<br>AGCCTTGCCA | TGTTAATTAC<br>ACAATTAATG  | CTGGGCGGCG<br>GACCCGCCGC | AGCACGATCT<br>TCGTGCTAGA |
| 7051 | CGTCAAAGCC<br>GCAGTTTTCG | GTTGATGTTG<br>CAACTACAAC | TGGCCACAA<br>ACCGGGTGT    | TGTAAAGTTC<br>ACATTTCAAG | CAAGAAGCGC<br>GTTCTTCGCG |
| 7101 | GGGATGCCCT<br>CCCTACGGGA | TGATGGAAGG<br>ACTACCTTCC | CAATTTTTTT<br>GTTAAAAAAT  | AGTTCCTCGT<br>TCAAGGAGCA | AGGTGAGCTC<br>TCCACTCGAG |
| 7151 | TTCAGGGGAG<br>AAGTCCCCTC | CTGAGCCCGT<br>GACTCGGGCA | GCTCTGAAAG<br>CGAGACTTTC  | GGCCCAGTCT<br>CCGGGTCAGA | GCAAGATGAG<br>CGTTCTACTC |

FIG. 10A-9

|      |            |            |            |             |            |
|------|------------|------------|------------|-------------|------------|
| 7201 | GGTTGGAAGC | GACGAATGAG | CTCCACAGGT | CACGGGCCAT  | TAGCATTTGC |
|      | CCAACCTTCG | CTGCTTACTC | GAGGTGTCCA | GTGCCCGGTA  | ATCGTAAACG |
| 7251 | AGGTGGTCGC | GAAAGGTCCT | AAACTGGCGA | CCTATGGCCA  | TTTTTTCTGG |
|      | TCCACCAGCG | CTTTCCAGGA | TTTGACCGCT | GGATACCGGT  | AAAAAAGACC |
| 7301 | GGTGATGCAG | TAGAAGGTAA | GCGGGTCTTG | TTCCCAGCGG  | TCCCATCCAA |
|      | CCACTACGTC | ATCTTCCATT | CGCCCAGAAC | AAGGGTCGCC  | AGGGTAGGTT |
| 7351 | GGTTCGCGGC | TAGGTCTCGC | GCGGCAGTCA | CTAGAGGCTC  | ATCTCCGCCG |
|      | CCAAGCGCCG | ATCCAGAGCG | CGCCGTCAGT | GATCTCCGAG  | TAGAGGCGGC |
| 7401 | AACTTCATGA | CCAGCATGAA | GGGCACGAGC | TGCTTCCCAA  | AGGCCCCCAT |
|      | TTGAAGTACT | GGTCGTACTT | CCCGTGCTCG | ACGAAGGGTT  | TCCGGGGGTA |
| 7451 | CCAAGTATAG | GTCTCTACAT | CGTAGGTGAC | AAAGAGACGC  | TCGGTGCGAG |
|      | GGTTCATATC | CAGAGATGTA | GCATCCACTG | TTTCTCTGCG  | AGCCACGCTC |
| 7501 | GATGCGAGCC | GATCGGGAAG | AACTGGATCT | CCCGCCACCA  | ATTGGAGGAG |
|      | CTACGCTCGG | CTAGCCCTTC | TTGACCTAGA | GGGCGGTGGT  | TAACCTCCTC |
| 7551 | TGGCTATTGA | TGTGGTGAAA | GTAGAAGTCC | CTGCGACGGG  | CCGAACACTC |
|      | ACCGATAACT | ACACCACTTT | CATCTTCAGG | GACGCTGCCC  | GGCTTGTGAG |
| 7601 | GTGCTGGCTT | TTGTAAAAAC | GTGCGCAGTA | CTGGCAGCGG  | TGCACGGGCT |
|      | CACGACCGAA | AACATTTTTG | CACGCGTCAT | GACCGTCGCC  | ACGTGCCCGA |
| 7651 | GTACATCCTG | CACGAGGTTG | ACCTGACGAC | CGCGCACAAAG | GAAGCAGAGT |
|      | CATGTAGGAC | GTGCTCCAAC | TGGACTGCTG | GCGCGTGTTT  | CTTCGTCTCA |
| 7701 | GGGAATTTGA | GCCCCTCGCC | TGGCGGGTTT | GGCTGGTGGT  | CTTCTACTTC |
|      | CCCTTAAACT | CGGGGAGCGG | ACCGCCCAA  | CCGACCACCA  | GAAGATGAAG |
| 7751 | GGCTGCTTGT | CCTTGACCGT | CTGGCTGCTC | GAGGGGAGTT  | ACGGTGGATC |
|      | CCGACGAACA | GGAAGTGGCA | GACCGACGAG | CTCCCCCTCA  | TGCCACCTAG |
| 7801 | GGACCACCAC | GCCGCGCGAG | CCCAAAGTCC | AGATGTCCGC  | GCGCGGCGGT |
|      | CCTGGTGGTG | CGGCGCGCTC | GGGTTTCAGG | TCTACAGGCG  | CGCGCCGCCA |
| 7851 | CGGAGCTTGA | TGACAACATC | GCGCAGATGG | GAGCTGTCCA  | TGGTCTGGAG |
|      | GCCTCGAACT | ACTGTTGTAG | CGCGTCTACC | CTCGACAGGT  | ACCAGACCTC |
| 7901 | CTCCCGCGGC | GTCAGGTCAG | GCGGGAGCTC | CTGCAGGTTT  | ACCTCGCATA |
|      | GAGGGCGCCG | CAGTCCAGTC | CGCCCTCGAG | GACGTCCAAA  | TGGAGCGTAT |
| 7951 | GACGGGTCAG | GGCGCGGGCT | AGATCCAGGT | GATACCTAAT  | TTCCAGGGGC |
|      | CTGCCCAGTC | CCGCGCCCGA | TCTAGGTCCA | CTATGGATTA  | AAGGTCCCCG |

FIG. 10A-10

|      |                          |                          |                          |                           |                           |
|------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 8001 | TGGTTGGTGG<br>ACCAACCACC | CGGCGTCGAT<br>GCCGCAGCTA | GGCTTGCAAG<br>CCGAACGTTC | AGGCCGCATC<br>TCCGGCGTAG  | CCCGCGGCGC<br>GGGCGCCGCG  |
| 8051 | GACTACGGTA<br>CTGATGCCAT | CCGCGCGGGC<br>GGCGCGCCGC | GGCGGTGGGC<br>CCGCCACCCG | CGCGGGGGTG<br>GCGCCCCCAC  | TCCTTGGATG<br>AGGAACCTAC  |
| 8101 | ATGCATCTAA<br>TACGTAGATT | AAGCGGTGAC<br>TTCGCCACTG | GCGGGCGAGC<br>CGCCCGCTCG | CCCCGGAGGT<br>GGGGCCTCCA  | AGGGGGGGCT<br>TCCCCCCCCG  |
| 8151 | CCGGACCCGC<br>GGCCTGGGCG | CGGGAGAGGG<br>GCCCTCTCCC | GGCAGGGGCA<br>CCGTCCCCGT | CGTCGGCGCC<br>GCAGCCGCGG  | GCGCGCGGGC<br>CGCGCGCCCG  |
| 8201 | AGGAGCTGGT<br>TCCTCGACCA | GCTGCGCGCG<br>CGACGCGCGC | TAGGTTGCTG<br>ATCCAACGAC | GCGAACGCGA<br>CGCTTGCGCT  | CGACGCGGCG<br>GCTGCGCCGC  |
| 8251 | GTTGATCTCC<br>CAACTAGAGG | TGAATCTGGC<br>ACTTAGACCG | GCCTCTGCGT<br>CGGAGACGCA | GAAGACGACG<br>CTTCTGCTGC  | GGCCCCGGTGA<br>CCGGGCCACT |
| 8301 | GCTTGAACCT<br>CGAACTTGGA | GAAAGAGAGT<br>CTTTCTCTCA | TCGACAGAAT<br>AGCTGTCTTA | CAATTTCTGGT<br>GTTAAAGCCA | GTCGTTGACG<br>CAGCAACTGC  |
| 8351 | GCGGCCTGGC<br>CGCCGGACCG | GCAAAATCTC<br>CGTTTTAGAG | CTGCACGTCT<br>GACGTGCAGA | CCTGAGTTGT<br>GGACTCAACA  | CTTGATAGGC<br>GAACTATCCG  |
| 8401 | GATCTCGGCC<br>CTAGAGCCGG | ATGAACTGCT<br>TACTTGACGA | CGATCTCTTC<br>GCTAGAGAAG | CTCCTGGAGA<br>GAGGACCTCT  | TCTCCGCGTC<br>AGAGGCGCAG  |
| 8451 | CGGCTCGCTC<br>GCCGAGCGAG | CACGGTGGCG<br>GTGCCACCGC | GCGAGGTCGT<br>CGCTCCAGCA | TGGAAATGCG<br>ACCTTTACGC  | GGCCATGAGC<br>CCGGTACTCG  |
| 8501 | TGCGAGAAGG<br>ACGCTCTTCC | CGTTGAGGCC<br>GCAACTCCGG | TCCCTCGTTC<br>AGGGAGCAAG | CAGACGCGGC<br>GTCTGCGCCG  | TGTAGACCAC<br>ACATCTGGTG  |
| 8551 | GCCCCCTTCG<br>CGGGGGAAGC | GCATCGCGGG<br>CGTAGCGCCC | CGCGCATGAC<br>GCGCGTACTG | CACCTGCGCG<br>GTGGACGCGC  | AGATTGAGCT<br>TCTAACTCGA  |
| 8601 | CCACGTGCCG<br>GGTGCACGGC | GGCGAAGACG<br>CCGCTTCTGC | GCGTAGTTTC<br>CGCATCAAAG | GCAGGCGCTG<br>CGTCCGCGAC  | AAAGAGGTTAG<br>TTTCTCCATC |
| 8651 | TTGAGGGTGG<br>AACTCCCACC | TGGCGGTGTG<br>ACCGCCACAC | TTCTGCCACG<br>AAGACGGTGC | AAGAAGTACA<br>TTCTTCATGT  | TAACCCAGCG<br>ATTGGGTGCG  |
| 8701 | TCGCAACGTG<br>AGCGTTGCAC | GATTCGTTGA<br>CTAAGCAACT | TATCCCCCAA<br>ATAGGGGGTT | GGCCTCAAGG<br>CCGGAGTTCC  | CGCTCCATGG<br>GCGAGGTACC  |
| 8751 | CCTCGTAGAA<br>GGAGCATCTT | GTCCACGGCG<br>CAGGTGCCGC | AAGTTGAAAA<br>TTCAACTTTT | ACTGGGAGTT<br>TGACCCTCAA  | GCGCGCCGAC<br>CGCGCGGCTG  |

FIG. 10A-11

|      |            |            |            |             |            |
|------|------------|------------|------------|-------------|------------|
| 8801 | ACGGTTAACT | CCTCCTCCAG | AAGACGGATG | AGCTCGGCGA  | CAGTGTGCGG |
|      | TGCCAATTGA | GGAGGAGGTC | TTCTGCCTAC | TCGAGCCGCT  | GTCACAGCGC |
| 8851 | CACCTCGCGC | TCAAAGGCTA | CAGGGGCCTC | TTCTTCTTCT  | TCAATCTCCT |
|      | GTGGAGCGCG | AGTTTCCGAT | GTCCCCGGAG | AAGAAGAAGA  | AGTTAGAGGA |
| 8901 | CTTCCATAAG | GGCCTCCCCT | TCTTCTTCTT | CTGGCGGCGG  | TGGGGGAGGG |
|      | GAAGGTATTC | CCGGAGGGGA | AGAAGAAGAA | GACCGCCGCC  | ACCCCCTCCC |
| 8951 | GGGACACGGC | GGCGACGACG | GCGCACCGGG | AGGCGGTGCGA | CAAAGCGCTC |
|      | CCCTGTGCCG | CCGCTGCTGC | CGCGTGGCCC | TCCGCCAGCT  | GTTTCGCGAG |
| 9001 | GATCATCTCC | CCGCGGCGAC | GGCGCATGGT | CTCGGTGACG  | GCGCGGCCGT |
|      | CTAGTAGAGG | GGCGCCGCTG | CCGCGTACCA | GAGCCACTGC  | CGCGCCGGCA |
| 9051 | TCTCGCGGGG | GCGCAGTTGG | AAGACGCCGC | CCGTCATGTC  | CCGGTTATGG |
|      | AGAGCGCCCC | CGCGTCAACC | TTCTGCGGCG | GGCAGTACAG  | GGCCAATACC |
| 9101 | GTTGGCGGGG | GGCTGCCATG | CGGCAGGGAT | ACGGCGCTAA  | CGATGCATCT |
|      | CAACCGCCCC | CCGACGGTAC | GCCGTCCCTA | TGCCGCGATT  | GCTACGTAGA |
| 9151 | CAACAATTGT | TGTGTAGGTA | CTCCGCCGCC | GAGGGACCTG  | AGCGAGTCCG |
|      | GTTGTTAACA | ACACATCCAT | GAGGCGGCGG | CTCCCTGGAC  | TCGCTCAGGC |
| 9201 | CATCGACCGG | ATCGGAAAAC | CTCTCGAGAA | AGGCGTCTAA  | CCAGTCACAG |
|      | GTAGCTGGCC | TAGCCTTTTG | GAGAGCTCTT | TCCGCAGATT  | GGTCAGTGTC |
| 9251 | TCGCAAGGTA | GGCTGAGCAC | CGTGGCGGGC | GGCAGCGGGC  | GGCGGTGCGG |
|      | AGCGTTCCAT | CCGACTCGTG | GCACCGCCCC | CCGTCGCCCC  | CCGCCAGCCC |
| 9301 | GTTGTTTCTG | GCGGAGGTGC | TGCTGATGAT | GTAATTAAAG  | TAGGCGGTCT |
|      | CAACAAAGAC | CGCCTCCACG | ACGACTACTA | CATTAATTTT  | ATCCGCCAGA |
| 9351 | TGAGACGGCG | GATGGTCGAC | AGAAGCACCA | TGTCCTTGGG  | TCCGGCCTGC |
|      | ACTCTGCCGC | CTACCAGCTG | TCTTCGTGGT | ACAGGAACCC  | AGGCCGGACG |
| 9401 | TGAATGCGCA | GGCGGTCGGC | CATGCCCCAG | GCTTCGTTTT  | GACATCGGCG |
|      | ACTTACGCGT | CCGCCAGCCG | GTACGGGGTC | CGAAGCAAAA  | CTGTAGCCGC |
| 9451 | CAGGTCTTTG | TAGTAGTCTT | GCATGAGCCT | TTCTACCGGC  | ACTTCTTCTT |
|      | GTCCAGAAAC | ATCATCAGAA | CGTACTCGGA | AAGATGGCCG  | TGAAGAAGAA |
| 9501 | CTCCTTCCTC | TTGTCCTGCA | TCTCTTGCA  | CTATCGCTGC  | GGCGGCGGCG |
|      | GAGGAAGGAG | AACAGGACGT | AGAGAACGTA | GATAGCGACG  | CCGCCGCCGC |
| 9551 | GAGTTTGGCC | GTAGGTGGCG | CCCTCTTCCT | CCCATGCGTG  | TGACCCCGAA |
|      | CTCAAACCGG | CATCCACCGC | GGGAGAAGGA | GGGTACGCAC  | ACTGGGGCTT |

FIG. 10A-12

|       |                          |                          |                            |                          |                          |
|-------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 9601  | GCCCCTCATC<br>CGGGGAGTAG | GGCTGAAGCA<br>CCGACTTCGT | GGGCTAGGTC<br>CCCGATCCAG   | GGCGACAACG<br>CCGCTGTTGC | CGCTCGGCTA<br>GCGAGCCGAT |
| 9651  | ATATGGCCTG<br>TATAACGGAC | CTGCACCTGC<br>GACGTGGACG | GTGAGGGTAG<br>CACTCCCATC   | ACTGGAAGTC<br>TGACCTTCAG | ATCCATGTCC<br>TAGGTACAGG |
| 9701  | ACAAAGCGGT<br>TGTTTCGCCA | GGTATGCGCC<br>CCATACGCGG | CGTGTTGATG<br>GCACAACACTAC | GTGTAAGTGC<br>CACATTCACG | AGTTGGCCAT<br>TCAACCGGTA |
| 9751  | AACGGACCAG<br>TTGCCTGGTC | TTAACGGTCT<br>AATTGCCAGA | GGTGACCCGG<br>CCACTGGGCC   | CTGCGAGAGC<br>GACGCTCTCG | TCGGTGTACC<br>AGCCACATGG |
| 9801  | TGAGACGCGA<br>ACTCTGCGCT | GTAAGCCCTC<br>CATTCGGGAG | GAGTCAAATA<br>CTCAGTTTAT   | CGTAGTCGTT<br>GCATCAGCAA | GCAAGTCCGC<br>CGTTCAGGCG |
| 9851  | ACCAGGTACT<br>TGGTCCATGA | GGTATCCCAC<br>CCATAGGGTG | CAAAAAGTGC<br>GTTTTTCACG   | GGCGGCGGCT<br>CCGCCGCCGA | GGCGGTAGAG<br>CCGCCATCTC |
| 9901  | GGGCCAGCGT<br>CCCGGTCGCA | AGGGTGGCCG<br>TCCCACCGGC | GGGCTCCGGG<br>CCCGAGGCCC   | GGCGAGATCT<br>CCGCTCTAGA | TCCAACATAA<br>AGGTTGTATT |
| 9951  | GGCGATGATA<br>CCGCTACTAT | TCCGTAGATG<br>AGGCATCTAC | TACCTGGACA<br>ATGGACCTGT   | TCCAGGTGAT<br>AGGTCCACTA | GCCGGCGGCG<br>CGGCCGCCGC |
| 10001 | GTGGTGGAGG<br>CACCACCTCC | CGCGCGGAAA<br>GCGCGCCTTT | GTCGCGGACG<br>CAGCGCCTGC   | CGGTTCCAGA<br>GCCAAGGTCT | TGTTGCGCAG<br>ACAACGCGTC |
| 10051 | CGGCAAAAAG<br>GCCGTTTTTC | TGCTCCATGG<br>ACGAGGTACC | TCGGGACGCT<br>AGCCCTGCGA   | CTGGCCGGTC<br>GACCGGCCAG | AGGCGCGCGC<br>TCCGCGCGCG |
| 10101 | AATCGTTGAC<br>TTAGCAACTG | GCTCTAGACC<br>CGAGATCTGG | GTGCAAAAGG<br>CACGTTTTCC   | AGAGCCTGTA<br>TCTCGGACAT | AGCGGGCACT<br>TCGCCCGTGA |
| 10151 | CTTCCGTGGT<br>GAAGGCACCA | CTGGTGGATA<br>GACCACCTAT | AATTCGCAAG<br>TTAAGCGTTC   | GGTATCATGG<br>CCATAGTACC | CGGACGACCG<br>GCCTGCTGGC |
| 10201 | GGGTTCGAGC<br>CCCAAGCTCG | CCCGTATCCG<br>GGGCATAGGC | GCCGTCCGCC<br>CGGCAGGCGG   | GTGATCCATG<br>CACTAGGTAC | CGGTTACCGC<br>GCCAATGGCG |
| 10251 | CCGCGTGTCG<br>GGCGCACAGC | AACCCAGGTG<br>TTGGGTCCAC | TGCGACGTCA<br>ACGCTGCAGT   | GACAACGGGG<br>CTGTTGCCCC | GAGTGCTCCT<br>CTCACGAGGA |
| 10301 | TTTGGCTTCC<br>AAACCGAAGG | TTCCAGGCGC<br>AAGGTCCGCG | GGCGGCTGCT<br>CCGCCGACGA   | GCGCTAGCTT<br>CGCGATCGAA | TTTTGGCCAC<br>AAAACCGGTG |
| 10351 | TGGCCGCGCG<br>ACGGGCGCGC | CAGCGTAAGC<br>GTCGCATTCG | GGTTAGGCTG<br>CCAATCCGAC   | GAAAGCGAAA<br>CTTTCGCTTT | GCATTAAGTG<br>CGTAATTCAC |

FIG. 10A-13

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10401 | GCTCGCTCCC<br>CGAGCGAGGG | TGTAGCCGGA<br>ACATCGGCCT | GGGTTATTTT<br>CCCAATAAAA | CCAAGGGTTG<br>GGTTCCCAAC | AGTCGCGGGA<br>TCAGCGCCCT |
| 10451 | CCCCCGGTTT<br>GGGGGCCAAG | GAGTCTCGGA<br>CTCAGAGCCT | CCGGCCGGAC<br>GGCCGGCCTG | TGCGGCGAAC<br>ACGCCGCTTG | GGGGGTTTGC<br>CCCCCAAACG |
| 10501 | CTCCCCGTCA<br>GAGGGGCAGT | TGCAAGACCC<br>ACGTTCTGGG | CGCTTGCAAA<br>GCGAACGTTT | TTCTTCCGGA<br>AAGGAGGCCT | AACAGGGACG<br>TTGTCCCTGC |
| 10551 | AGCCCCTTTT<br>TCGGGGAAAA | TTGCTTTTCC<br>AACGAAAAGG | CAGATGCATC<br>GTCTACGTAG | CGGTGCTGCG<br>GCCACGACGC | GCAGATGCGC<br>CGTCTACGCG |
| 10601 | CCCCCTCCTC<br>GGGGGAGGAG | AGCAGCGGCA<br>TCGTCGCCGT | AGAGCAAGAG<br>TCTCGTTCTC | CAGCGGCAGA<br>GTCGCCGTCT | CATGCAGGGC<br>GTACGTCCCG |
| 10651 | ACCCTCCCCT<br>TGGGAGGGGA | CCTCCTACCG<br>GGAGGATGGC | CGTCAGGAGG<br>GCAGTCCTCC | GGCGACATCC<br>CCGCTGTAGG | GCGGTTGACG<br>CGCCAACTGC |
| 10701 | CGGCAGCAGA<br>GCCGTCTGCT | TGGTGATTAC<br>ACCACTAATG | GAACCCCCGC<br>CTTGGGGGCG | GGCGCCGGGC<br>CCGCGGCCCG | CCGGCACTAC<br>GGCCGTGATG |
| 10751 | CTGGACTTGG<br>GACCTGAACC | AGGAGGGCGA<br>TCCTCCCGCT | GGGCCTGGCG<br>CCCGGACCGC | CGGCTAGGAG<br>GCCGATCCTC | CGCCCTCTCC<br>GCGGGAGAGG |
| 10801 | TGAGCGGCAC<br>ACTCGCCGTG | CCAAGGGTGC<br>GGTTCCCACG | AGCTGAAGCG<br>TCGACTTCGC | TGATACGCGT<br>ACTATGCGCA | GAGGCGTACG<br>CTCCGCATGC |
| 10851 | TGCCGCGGCA<br>ACGGCGCCGT | GAACCTGTTT<br>CTTGGACAAA | CGCGACCGCG<br>GCGCTGGCGC | AGGGAGAGGA<br>TCCCTCTCCT | GCCCGAGGAG<br>CGGGCTCCTC |
| 10901 | ATGCGGGATC<br>TACGCCCTAG | GAAAGTTCCA<br>CTTTCAAGGT | CGCAGGGCGC<br>GCGTCCCGCG | GAGCTGCGGC<br>CTCGACGCCG | ATGGCCTGAA<br>TACCGGACTT |
| 10951 | TCGCGAGCGG<br>AGCGCTCGCC | TTGCTGCGCG<br>AACGACGCGC | AGGAGGACTT<br>TCCTCCTGAA | TGAGCCCGAC<br>ACTCGGGCTG | GCGCGAACCG<br>CGCGCTTGGC |
| 11001 | GGATTAGTCC<br>CCTAATCAGG | CGCGCGCGCA<br>GCGCGCGCGT | CACGTGGCGG<br>GTGCACCGCC | CCGCCGACCT<br>GGCGGCTGGA | GGTAACCGCA<br>CCATTGGCGT |
| 11051 | TACGAGCAGA<br>ATGCTCGTCT | CGGTGAACCA<br>GCCACTTGGT | GGAGATTAAC<br>CCTCTAATTG | TTTCAAAAAA<br>AAAGTTTTTT | GCTTTAACAA<br>CGAAATTGTT |
| 11101 | CCACGTGCGT<br>GGTGACGCA  | ACGCTTGTGG<br>TGCGAACACC | CGCGCGAGGA<br>GCGCGCTCCT | GGTGGCTATA<br>CCACCGATAT | GGACTGATGC<br>CCTGACTACG |
| 11151 | ATCTGTGGGA<br>TAGACACCCT | CTTTGTAAGC<br>GAAACATTGC | GCGCTGGAGC<br>CGCGACCTCG | AAAACCCAAA<br>TTTTGGGTTT | TAGCAAGCCG<br>ATCGTTCGGC |

FIG. 10A-14

|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 11201 | CTCATGGCGC | AGCTGTTCCCT | TATAGTGCAG | CACAGCAGGG | ACAACGAGGC |
|       | GAGTACCGCG | TCGACAAGGA  | ATATCACGTC | GTGTCGTCCC | TGTTGCTCCG |
| 11251 | ATTCAGGGAT | GCGCTGCTAA  | ACATAGTAGA | GCCCGAGGGC | CGCTGGCTGC |
|       | TAAGTCCCTA | CGCGACGATT  | TGTATCATCT | CGGGCTCCCG | GCGACCGACG |
| 11301 | TCGATTTGAT | AAACATCCTG  | CAGAGCATAG | TGGTGCAGGA | GCGCAGCTTG |
|       | AGCTAAACTA | TTTGTAGGAC  | GTCTCGTATC | ACCACGTCCT | CGCGTCGAAC |
| 11351 | AGCCTGGCTG | ACAAGGTGGC  | CGCCATCAAC | TATTCCATGC | TTAGCCTGGG |
|       | TCGGACCGAC | TGTTCCACCG  | GCGGTAGTTG | ATAAGGTACG | AATCGGACCC |
| 11401 | CAAGTTTTAC | GCCCGCAAGA  | TATACCATAC | CCCTTACGTT | CCCATAGACA |
|       | GTTCAAAATG | CGGGCGTTCT  | ATATGGTATG | GGAATGCAA  | GGGTATCTGT |
| 11451 | AGGAGGTAAA | GATCGAGGGG  | TTCTACATGC | GCATGGCGCT | GAAGGTGCTT |
|       | TCCTCCATTT | CTAGCTCCCC  | AAGATGTACG | CGTACCGCGA | CTTCCACGAA |
| 11501 | ACCTTGAGCG | ACGACCTGGG  | CGTTTATCGC | AACGAGCGCA | TCCACAAGGC |
|       | TGGAACTCGC | TGCTGGACCC  | GCAAATAGCG | TTGCTCGCGT | AGGTGTTCCG |
| 11551 | CGTGAGCGTG | AGCCGGCGGC  | GCGAGCTCAG | CGACCGCGAG | CTGATGCACA |
|       | GCACTCGCAC | TCGGCCGCCG  | CGCTCGAGTC | GCTGGCGCTC | GACTACGTGT |
| 11601 | GCCTGCAAAG | GGCCCTGGCT  | GGCACGGGCA | GCGGCGATAG | AGAGGCCGAG |
|       | CGGACGTTTC | CCGGGACCGA  | CCGTGCCCCG | CGCCGCTATC | TCTCCGGCTC |
| 11651 | TCCTACTTTG | ACGCGGGCGC  | TGACCTGCGC | TGGGCCCCAA | GCCGACGCGC |
|       | AGGATGAAAC | TGCGCCCGCG  | ACTGGACGCG | ACCCGGGGTT | CGGCTGCGCG |
| 11701 | CCTGGAGGCA | GCTGGGGCCG  | GACCTGGGCT | GGCGGTGGCA | CCCGCGCGCG |
|       | GGACCTCCGT | CGACCCCGGC  | CTGGACCCGA | CCGCCACCGT | GGGCGCGCGC |
| 11751 | CTGGCAACGT | CGGCGGCGTG  | GAGGAATATG | ACGAGGACGA | TGAGTACGAG |
|       | GACCGTTGCA | GCCGCCGCAC  | CTCCTTATAC | TGCTCCTGCT | ACTCATGCTC |
| 11801 | CCAGAGGACG | GCGAGTACTA  | AGCGGTGATG | TTTCTGATCA | GATGATGCAA |
|       | GGTCTCCTGC | CGCTCATGAT  | TCGCCACTAC | AAAGACTAGT | CTACTACGTT |
| 11851 | GACGCAACGG | ACCCGGCGGT  | GCGGGCGGGC | CTGCAGAGCC | AGCCGTCCGG |
|       | CTGCGTTGCC | TGGGCCGCCA  | CGCCCGCCGC | GACGTCTCGG | TCGGCAGGCC |
| 11901 | CCTTAACTCC | ACGGACGACT  | GGCGCCAGGT | CATGGACCGC | ATCATGTCGC |
|       | GGAATTGAGG | TGCCTGCTGA  | CCGCGGTCCA | GTACCTGGCG | TAGTACAGCG |
| 11951 | TGACTGCGCG | CAATCCTGAC  | GCGTTCCGGC | AGCAGCCGCA | GGCCAACCGG |
|       | ACTGACGCGC | GTTAGGACTG  | CGCAAGGCCG | TCGTCGGCGT | CCGGTTGGCC |

FIG. 10A-15



|       |             |             |            |             |             |
|-------|-------------|-------------|------------|-------------|-------------|
| 12001 | CTCTCCGCAA  | TTCTGGAAGC  | GGTGGTCCCG | GCGCGCGCAA  | ACCCACGCA   |
|       | GAGAGGCGTT  | AAGACCTTCG  | CCACCAGGGC | CGCGCGCGTT  | TGGGGTGCGT  |
| 12051 | CGAGAAGGTG  | CTGGCGATCG  | TAAACGCGCT | GGCCGAAAAC  | AGGGCCATCC  |
|       | GCTCTTCCAC  | GACCGCTAGC  | ATTTGCGCGA | CCGGCTTTTG  | TCCCGGTAGG  |
| 12101 | GGCCCGACGA  | GGCCGGCCTG  | GTCTACGACG | CGCTGCTTCA  | GCGCGTGGCT  |
|       | CCGGGCTGCT  | CCGGCCGGAC  | CAGATGCTGC | GCGACGAAGT  | CGCGCACC GA |
| 12151 | CGTTACAACA  | GCGGCAACGT  | GCAGACCAAC | CTGGACCGGC  | TGGTGGGGGA  |
|       | GCAATGTTGT  | CGCCGTTGCA  | CGTCTGGTTG | GACCTGGCCG  | ACCACCCCT   |
| 12201 | TGTGCGCGAG  | GCCGTGGCGC  | AGCGTGAGCG | CGCGCAGCAG  | CAGGGCAACC  |
|       | ACACGCGCTC  | CGGCACCGCG  | TCGCACTCGC | GCGCGTCGTC  | GTCCCGTTGG  |
| 12251 | TGGGCTCCAT  | GGTTGCACTA  | AACGCCTTCC | TGAGTACACA  | GCCCGCCAAC  |
|       | ACCCGAGGTA  | CCAACGTGAT  | TTGCGGAAGG | ACTCATGTGT  | CGGGCGGTTG  |
| 12301 | GTGCCGCGGG  | GACAGGAGGA  | CTACACCAAC | TTTGTGAGCG  | CACTGCGGCT  |
|       | CACGGCGCCC  | CTGTCCTCCT  | GATGTGGTTG | AAACACTCGC  | GTGACGCCGA  |
| 12351 | AATGGTGA CT | GAGACACCGC  | AAAGTGAGGT | GTACCAGTCT  | GGGCCAGACT  |
|       | TTACCACTGA  | CTCTGTGGCG  | TTTCACTCCA | CATGGTCAGA  | CCCGGTCTGA  |
| 12401 | ATTTTTTTCCA | GACCAGTAGA  | CAAGGCCTGC | AGACCGTAAA  | CCTGAGCCAG  |
|       | TAAAAAAGGT  | CTGGTCATCT  | GTTCCGGACG | TCTGGCATT T | GGACTCGGTC  |
| 12451 | GCTTTCAAAA  | ACTTGCA GGG | GCTGTGGGGG | GTGCGGGCTC  | CCACAGGCGA  |
|       | CGAAAGTTTT  | TGAACGTCCC  | CGACACCCCC | CACGCCCGAG  | GGTGTCCGCT  |
| 12501 | CCGCGCGACC  | GTGTCTAGCT  | TGCTGACGCC | CAACTCGCGC  | CTGTTGCTGC  |
|       | GGCGCGCTGG  | CACAGATCGA  | ACGACTGCGG | GTTGAGCGCG  | GACAACGACG  |
| 12551 | TGCTAATAGC  | GCCCTTCACG  | GACAGTGGCA | GCGTGTCCCG  | GGACACATAC  |
|       | ACGATTATCG  | CGGGAAGTGC  | CTGTCACCGT | CGCACAGGGC  | CCTGTGTATG  |
| 12601 | CTAGGTCACT  | TGCTGACACT  | GTACCGCGAG | GCCATAGGTC  | AGGCGCATGT  |
|       | GATCCAGTGA  | ACGACTGTGA  | CATGGCGCTC | CGGTATCCAG  | TCCGCGTACA  |
| 12651 | GGACGAGCAT  | ACTTTCCAGG  | AGATTACAAG | TGTCAGCCGC  | GCGCTGGGGC  |
|       | CCTGCTCGTA  | TGAAAGGTCC  | TCTAATGTTT | ACAGTCGGCG  | CGCGACCCCG  |
| 12701 | AGGAGGACAC  | GGGCAGCCTG  | GAGGCAACCC | TAAACTACCT  | GCTGACCAAC  |
|       | TCCTCCTGTG  | CCCGTCGGAC  | CTCCGTTGGG | ATTTGATGGA  | CGACTGGTTG  |
| 12751 | CGGCGGCAGA  | AGATCCCCTC  | GTTGCACAGT | TTAAACAGCG  | AGGAGGAGCG  |
|       | GCCGCCGTCT  | TCTAGGGGAG  | CAACGTGTCA | AATTTGTCGC  | TCCTCCTCGC  |

FIG. 10A-16

|       |            |            |             |             |             |
|-------|------------|------------|-------------|-------------|-------------|
| 12801 | CATTTTGCGC | TACGTGCAGC | AGAGCGTGAG  | CCTTAACCTG  | ATGCGCGACG  |
|       | GTAAAACGCG | ATGCACGTCG | TCTCGCACTC  | GGAATTGGAC  | TACGCGCTGC  |
| 12851 | GGGTAACGCC | CAGCGTGGCG | CTGGACATGA  | CCGCGCGCAA  | CATGGAACCG  |
|       | CCCATTGCGG | GTCGCACCGC | GACCTGTACT  | GGCGCGCGTT  | GTACCTTGGC  |
| 12901 | GGCATGTATG | CCTCAAACCG | GCCGTTTATC  | AACCGCCTAA  | TGGACTACTT  |
|       | CCGTACATAC | GGAGTTTGGC | CGGCAAATAG  | TTGGCGGATT  | ACCTGATGAA  |
| 12951 | GCATCGCGCG | GCCGCCGTGA | ACCCCGAGTA  | TTTCACCAAT  | GCCATCTTGA  |
|       | CGTAGCGCGC | CGGCGGCACT | TGGGGCTCAT  | AAAGTGGTTA  | CGGTAGAACT  |
| 13001 | ACCCGCACTG | GCTACCGCCC | CCTGGTTTCT  | ACACCGGGGG  | ATTCGAGGTG  |
|       | TGGGCGTGAC | CGATGGCGGG | GGACCAAAGA  | TGTGGCCCCC  | TAAGCTCCAC  |
| 13051 | CCCGAGGGTA | ACGATGGATT | CCTCTGGGAC  | GACATAGACG  | ACAGCGTGTT  |
|       | GGGCTCCCAT | TGCTACCTAA | GGAGACCCTG  | CTGTATCTGC  | TGTCGCACAA  |
| 13101 | TTCCCCGCAA | CCGCAGACCC | TGCTAGAGTT  | GCAACAGCGC  | GAGCAGGCAG  |
|       | AAGGGGCGTT | GGCGTCTGGG | ACGATCTCAA  | CGTTGTCTCGC | CTCGTCCGTC  |
| 13151 | AGGCGGCGCT | GCGAAAGGAA | AGCTTCCGCA  | GGCCAAGCAG  | CTTGTCCGAT  |
|       | TCCGCCGCGA | CGCTTTCCTT | TCGAAGGCGT  | CCGGTTCGTC  | GAACAGGCTA  |
| 13201 | CTAGGCGCTG | CGGCCCCGCG | GTCAGATGCT  | AGTAGCCCAT  | TTCCAAGCTT  |
|       | GATCCGCGAC | GCCGGGGCGC | CAGTCTACGA  | TCATCGGGTA  | AAGGTTTCGAA |
| 13251 | GATAGGGTCT | CTTACCAGCA | CTCGCACCAAC | CCGCCCCGCG  | CTGCTGGGCG  |
|       | CTATCCCAGA | GAATGGTCGT | GAGCGTGGTG  | GGCGGGCGCG  | GACGACCCGC  |
| 13301 | AGGAGGAGTA | CCTAAACAAC | TCGCTGCTGC  | AGCCGCAGCG  | CGAAAAAAC   |
|       | TCCTCCTCAT | GGATTTGTTG | AGCGACGACG  | TCGGCGTCGC  | GCTTTTTTTG  |
| 13351 | CTGCCTCCGG | CATTTCCCAA | CAACGGGATA  | GAGAGCCTAG  | TGGACAAGAT  |
|       | GACGGAGGCC | GTAAAGGGTT | GTTGCCCTAT  | CTCTCGGATC  | ACCTGTTCTA  |
| 13401 | GAGTAGATGG | AAGACGTACG | CGCAGGAGCA  | CAGGGACGTG  | CCAGGCCCGC  |
|       | CTCATCTACC | TTCTGCATGC | GCGTCCTCGT  | GTCCCTGCAC  | GGTCCGGGCG  |
| 13451 | GCCCGCCAC  | CCGTCGTCAA | AGGCACGACC  | GTCAGCGGGG  | TCTGGTGTGG  |
|       | CGGGCGGGTG | GGCAGCAGTT | TCCGTGCTGG  | CAGTCGCCCC  | AGACCACACC  |
| 13501 | GAGGACGATG | ACTCGGCAGA | CGACAGCAGC  | GTCCTGGATT  | TGGGAGGGAG  |
|       | CTCCTGCTAC | TGAGCCGTCT | GCTGTCGTCG  | CAGGACCTAA  | ACCCTCCCTC  |
| 13551 | TGGCAACCCG | TTTGCGCACC | TTCGCCCCAG  | GCTGGGGAGA  | ATGTTTTTAA  |
|       | ACCGTTGGGC | AAACGCGTGG | AAGCGGGGTC  | CGACCCCTCT  | TACAAAATTT  |

FIG. 10A-17

|       |                           |                          |                           |                          |                          |
|-------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| 13601 | AAAAAAAAAA<br>TTTTTTTTTT  | GCATGATGCA<br>CGTACTACGT | AAATAAAAAA<br>TTTATTTTTT  | CTCACCAAGG<br>GAGTGGTTCC | CCATGGCACC<br>GGTACCGTGG |
| 13651 | GAGCGTTGGT<br>CTCGCAACCA  | TTTCTTGTAT<br>AAAGAACATA | TCCCCTTAGT<br>AGGGGAATCA  | ATGCGGCGCG<br>TACGCCGCGC | CGGCGATGTA<br>GCCGCTACAT |
| 13701 | TGAGGAAGGT<br>ACTCCTTCCA  | CCTCCTCCCT<br>GGAGGAGGGA | CCTACGAGAG<br>GGATGCTCTC  | TGTGGTGAGC<br>ACACCACTCG | GCGGCGCCAG<br>CGCCGCGGTC |
| 13751 | TGGCGGCGGC<br>ACCGCCGCCG  | GCTGGGTTCT<br>CGACCCAAGA | CCCTTCGATG<br>GGGAAGCTAC  | CTCCCCTGGA<br>GAGGGGACCT | CCCGCCGTTT<br>GGGCGGCAAA |
| 13801 | GTGCCTCCGC<br>CACGGAGGCG  | GGTACCTGCG<br>CCATGGACGC | GCCTACCGGG<br>CGGATGGCCC  | GGGAGAAACA<br>CCCTCTTTGT | GCATCCGTTA<br>CGTAGGCAAT |
| 13851 | CTCTGAGTTG<br>GAGACTCAAC  | GCACCCCTAT<br>CGTGGGGATA | TCGACACCAC<br>AGCTGTGGTG  | CCGTGTGTAC<br>GGCACACATG | CTGGTGGACA<br>GACCACCTGT |
| 13901 | ACAAGTCAAC<br>TGTTCAAGTTG | GGATGTGGCA<br>CCTACACCGT | TCCCTGAACT<br>AGGGACTTGA  | ACCAGAACGA<br>TGGTCTTGCT | CCACAGCAAC<br>GGTGTGCTTG |
| 13951 | TTTCTGACCA<br>AAAGACTGGT  | CGGTCATTCA<br>GCCAGTAAGT | AAACAATGAC<br>TTTGTTACTG  | TACAGCCCGG<br>ATGTCGGGCC | GGGAGGCAAG<br>CCCTCCGTTT |
| 14001 | CACACAGACC<br>GTGTGTCTGG  | ATCAATCTTG<br>TAGTTAGAAC | ACGACCGGTC<br>TGCTGGCCAG  | GCACTGGGGC<br>CGTGACCCCG | GGCGACCTGA<br>CCGCTGGACT |
| 14051 | AAACCATCCT<br>TTTGGTAGGA  | GCATACCAAC<br>CGTATGGTTG | ATGCCAAATG<br>TACGGTTTAC  | TGAACGAGTT<br>ACTTGCTCAA | CATGTTTACC<br>GTACAAATGG |
| 14101 | AATAAGTTTA<br>TTATTCAAAT  | AGGCGCGGGT<br>TCCGCGCCCA | GATGGTGTCTG<br>CTACCACAGC | CGCTTGCCTA<br>GCGAACGGAT | CTAAGGACAA<br>GATTCCTGTT |
| 14151 | TCAGGTGGAG<br>AGTCCACCTC  | CTGAAATACG<br>GACTTTATGC | AGTGGGTGGA<br>TCACCCACCT  | GTTACGCTG<br>CAAGTGCAC   | CCCGAGGGCA<br>GGGCTCCCGT |
| 14201 | ACTACTCCGA<br>TGATGAGGCT  | GACCATGACC<br>CTGGTACTGG | ATAGACCTTA<br>TATCTGGAAT  | TGAACAACGC<br>ACTTGTTGCG | GATCGTGGAG<br>CTAGCACCTC |
| 14251 | CACTACTTGA<br>GTGATGAACT  | AAGTGGGCAG<br>TTCACCCGTC | ACAGAACGGG<br>TGTCTTGCCC  | GTTCTGGAAA<br>CAAGACCTTT | GCGACATCGG<br>CGCTGTAGCC |
| 14301 | GGTAAAGTTT<br>CCATTTCAA   | GACACCCGCA<br>CTGTGGGCGT | ACTTCAGACT<br>TGAAGTCTGA  | GGGGTTTGAC<br>CCCCAACTG  | CCCGTCACTG<br>GGGCAGTGAC |
| 14351 | GTCTTGTCAT<br>CAGAACAGTA  | GCCTGGGGTA<br>CGGACCCCAT | TATACAAACG<br>ATATGTTTGC  | AAGCCTTCCA<br>TTCGGAAGGT | TCCAGACATC<br>AGGTCTGTAG |

FIG. 10A-18

|       |                          |                           |                          |                          |                          |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 14401 | ATTTTGCTGC<br>TAAAACGACG | CAGGATGCGG<br>GTCCTACGCC  | GGTGGACTTC<br>CCACCTGAAG | ACCCACAGCC<br>TGGGTGTCGG | GCCTGAGCAA<br>CGGACTCGTT |
| 14451 | CTTGTTGGGC<br>GAACAACCCG | ATCCGCAAGC<br>TAGGCGTTTCG | GGCAACCCTT<br>CCGTTGGGAA | CCAGGAGGGC<br>GGTCCTCCCG | TTTAGGATCA<br>AAATCCTAGT |
| 14501 | CCTACGATGA<br>GGATGCTACT | TCTGGAGGGT<br>AGACCTCCCA  | GGTAACATTC<br>CCATTGTAAG | CCGCACTGTT<br>GGCGTGACAA | GGATGTGGAC<br>CCTACACCTG |
| 14551 | GCCTACCAGG<br>CGGATGGTCC | CGAGCTTGAA<br>GCTCGAACTT  | AGATGACACC<br>TCTACTGTGG | GAACAGGGCG<br>CTTGTCCCGC | GGGGTGGCGC<br>CCCCACCGCG |
| 14601 | AGGCGGCAGC<br>TCCGCCGTCG | AACAGCAGTG<br>TTGTCGTCAC  | GCAGCGGCGC<br>CGTCGCCGCG | GGAAGAGAAC<br>CCTTCTCTTG | TCCAACGCGG<br>AGGTTGCGCC |
| 14651 | CAGCCGCGGC<br>GTCGGCGCCG | AATGCAGCCG<br>TTACGTCGGC  | GTGGAGGACA<br>CACCTCCTGT | TGAACGATCA<br>ACTTGCTAGT | TGCCATTTCG<br>ACGGTAAGCG |
| 14701 | GGCGACACCT<br>CCGCTGTGGA | TTGCCACACG<br>AACGGTGTGC  | GGCTGAGGAG<br>CCGACTCCTC | AAGCGCGCTG<br>TTCGCGCGAC | AGGCCGAAGC<br>TCCGGCTTCG |
| 14751 | AGCGGCCGAA<br>TCGCCGGCTT | GCTGCCGCCC<br>CGACGGCGGG  | CCGCTGCGCA<br>GGCGACGCGT | ACCCGAGGTC<br>TGGGCTCCAG | GAGAAGCCTC<br>CTCTTCGGAG |
| 14801 | AGAAGAAACC<br>TCTTCTTTGG | GGTGATCAAA<br>CCACTAGTTT  | CCCCTGACAG<br>GGGGACTGTC | AGGACAGCAA<br>TCCTGTCGTT | GAAACGCAGT<br>CTTTGCGTCA |
| 14851 | TACAACCTAA<br>ATGTTGGATT | TAAGCAATGA<br>ATTGTTACT   | CAGCACCTTC<br>GTCGTGGAAG | ACCCAGTACC<br>TGGGTCATGG | GCAGCTGGTA<br>CGTCGACCAT |
| 14901 | CCTTGCATAC<br>GGAACGTATG | AACTACGGCG<br>TTGATGCCGC  | ACCCTCAGAC<br>TGGGAGTCTG | CGGAATCCGC<br>GCCTTAGGCG | TCATGGACCC<br>AGTACCTGGG |
| 14951 | TGCTTTGCAC<br>ACGAAACGTG | TCCTGACGTA<br>AGGACTGCAT  | ACCTGCGGCT<br>TGGACGCCGA | CGGAGCAGGT<br>GCCTCGTCCA | CTACTGGTCG<br>GATGACCAGC |
| 15001 | TTGCCAGACA<br>AACGGTCTGT | TGATGCAAGA<br>ACTACGTTCT  | CCCCGTGACC<br>GGGGCACTGG | TTCCGCTCCA<br>AAGGCGAGGT | CGCGCCAGAT<br>GCGCGGTCTA |
| 15051 | CAGCAACTTT<br>GTCGTTGAAA | CCGGTGGTGG<br>GGCCACCACC  | GCGCCGAGCT<br>CGCGGCTCGA | GTTGCCCGTG<br>CAACGGGCAC | CACTCCAAGA<br>GTGAGGTTCT |
| 15101 | GCTTCTACAA<br>CGAAGATGTT | CGACCAGGCC<br>GCTGGTCCGG  | GTCTACTCCC<br>CAGATGAGGG | AACTCATCCG<br>TTGAGTAGGC | CCAGTTTACC<br>GGTCAAATGG |
| 15151 | TCTCTGACCC<br>AGAGACTGGG | ACGTGTTCAA<br>TGCACAAGTT  | TCGCTTTCCC<br>AGCGAAAGGG | GAGAACCAGA<br>CTCTTGGTCT | TTTTGGCGCG<br>AAAACCGCGC |

FIG. 10A-19

|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 15201 | CCCGCCAGCC<br>GGGCGGTCGG  | CCCACCATCA<br>GGGTGGTAGT | CCACCGTCAG<br>GGTGGCAGTC | TGAAAACGTT<br>ACTTTTGCAA  | CCTGCTCTCA<br>GGACGAGAGT |
| 15251 | CAGATCACGG<br>GTCTAGTGCC  | GACGCTACCG<br>CTGCGATGGC | CTGCGCAACA<br>GACGCGTTGT | GCATCGGAGG<br>CGTAGCCTCC  | AGTCCAGCGA<br>TCAGGTCGCT |
| 15301 | GTGACCATTA<br>CACTGGTAAT  | CTGACGCCAG<br>GACTGCGGTC | ACGCCGCACC<br>TGCGGCGTGG | TGCCCCCTACG<br>ACGGGGATGC | TTTACAAGGC<br>AAATGTTCCG |
| 15351 | CCTGGGCATA<br>GGACCCGTAT  | GTCTCGCCGC<br>CAGAGCGGCG | GCGTCCTATC<br>CGCAGGATAG | GAGCCGCACT<br>CTCGGCGTGA  | TTTTGAGCAA<br>AAAACTCGTT |
| 15401 | GCATGTCCAT<br>CGTACAGGTA  | CCTTATATCG<br>GGAATATAGC | CCCAGCAATA<br>GGGTCGTTAT | ACACAGGCTG<br>TGTGTCCGAC  | GGGCCTGCGC<br>CCCGGACGCG |
| 15451 | TTCCCAAGCA<br>AAGGGTTCGT  | AGATGTTTGG<br>TCTACAAACC | CGGGGCCAAG<br>GCCCGGTTTC | AAGCGCTCCG<br>TTCGCGAGGC  | ACCAACACCC<br>TGGTTGTGGG |
| 15501 | AGTGCGCGTG<br>TCACGCGCAC  | CGCGGGCACT<br>GCGCCCGTGA | ACCGCGCGCC<br>TGGCGCGCGG | CTGGGGCGCG<br>GACCCCGCGC  | CACAAACGCG<br>GTGTTTGCGC |
| 15551 | GCCGCACTGG<br>CGGCGTGACC  | GCGCACCACC<br>CGCGTGGTGG | GTCGATGACG<br>CAGCTACTGC | CCATCGACGC<br>GGTAGCTGCG  | GGTGGTGGAG<br>CCACCACCTC |
| 15601 | GAGGCGCGCA<br>CTCCGCGCGT  | ACTACACGCC<br>TGATGTGCGG | CACGCCGCCA<br>GTGCGGCGGT | CCAGTGTCCA<br>GGTCACAGGT  | CAGTGGACGC<br>GTCACCTGCG |
| 15651 | GGCCATTTCAG<br>CCGGTAAGTC | ACCGTGGTGC<br>TGGCACCACG | GCGGAGCCCG<br>CGCCTCGGGC | GCGCTATGCT<br>CGCGATACGA  | AAAATGAAGA<br>TTTTACTTCT |
| 15701 | GACGGCGGAG<br>CTGCCGCCTC  | GCGCGTAGCA<br>CGCGCATCGT | CGTCGCCACC<br>GCAGCGGTGG | GCCGCCGACC<br>CGGCGGCTGG  | CGGCACTGCC<br>GCCGTGACGG |
| 15751 | GCCCAACGCG<br>CGGGTTGCGC  | CGGCGGCGGC<br>GCCGCCGCCG | CCTGCTTAAC<br>GGACGAATTG | CGCGCACGTC<br>GCGCGTGACG  | GCACCGGCCG<br>CGTGGCCGGC |
| 15801 | ACGGGCGGCC<br>TGCCCCGCCG  | ATGCGGGCCG<br>TACGCCCGGC | CTCGAAGGCT<br>GAGCTTCCGA | GGCCGCGGGT<br>CCGGCGCCCA  | ATTGTCACTG<br>TAACAGTGAC |
| 15851 | TGCCCCCAG<br>ACGGGGGGTC   | GTCCAGGCGA<br>CAGGTCCGCT | CGAGCGGCCG<br>GCTCGCCGGC | CCGCAGCAGC<br>GGCGTCGTCTG | CGCGGCCATT<br>GCGCCGGTAA |
| 15901 | AGTGCTATGA<br>TCACGATACT  | CTCAGGGTCG<br>GAGTCCCAGC | CAGGGGCAAC<br>GTCCCCGTTG | GTGTATTGGG<br>CACATAACCC  | TGCGCGACTC<br>ACGCGCTGAG |
| 15951 | GGTTAGCGGC<br>CCAATCGCCG  | CTGCGCGTGC<br>GACGCGCACG | CCGTGCGCAC<br>GGCACGCGTG | CCGCCCCCGG<br>GGCGGGGGGC  | CGCAACTAGA<br>GCGTTGATCT |

FIG. 10A-20

|       |                           |                           |                          |                          |                          |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 16001 | TTGCAAGAAA<br>AACGTTCTTT  | AAACTACTTA<br>TTTGATGAAT  | GACTCGTACT<br>CTGAGCATGA | GTTGTATGTA<br>CAACATACAT | TCCAGCGGCG<br>AGGTCGCCGC |
| 16051 | GCGGCGCGCA<br>CGCCGCGCGT  | ACGAAGCTAT<br>TGCTTCGATA  | GTCCAAGCGC<br>CAGGTTTCGC | AAAATCAAAG<br>TTTTAGTTTC | AAGAGATGCT<br>TTCTCTACGA |
| 16101 | CCAGGTCATC<br>GGTCCAGTAG  | GCGCCGGAGA<br>CGCGGCCTCT  | TCTATGGCCC<br>AGATACCGGG | CCCGAAGAAG<br>GGGCTTCTTC | GAAGAGCAGG<br>CTTCTCGTCC |
| 16151 | ATTACAAGCC<br>TAATGTTTCGG | CCGAAAGCTA<br>GGCTTTTCGAT | AAGCGGGTCA<br>TTCGCCCAGT | AAAAGAAAAA<br>TTTTCTTTTT | GAAAGATGAT<br>CTTTCTACTA |
| 16201 | GATGATGAAC<br>CTACTACTTG  | TTGACGACGA<br>AACTGCTGCT  | GGTGGAACTG<br>CCACCTTGAC | CTGCACGCTA<br>GACGTGCGAT | CCGCGCCCAG<br>GGCGCGGGTC |
| 16251 | GCGACGGGTA<br>CGCTGCCCAT  | CAGTGGAAAG<br>GTCACCTTTC  | GTCGACGCGT<br>CAGCTGCGCA | AAAACGTGTT<br>TTTTGCACAA | TTGCGACCCG<br>AACGCTGGGC |
| 16301 | GCACCACCGT<br>CGTGGTGGCA  | AGTCTTTTACG<br>TCAGAAATGC | CCCGGTGAGC<br>GGGCCACTCG | GCTCCACCCG<br>CGAGGTGGGC | CACCTACAAG<br>GTGGATGTTT |
| 16351 | CGCGTGTATG<br>GCGCACATAC  | ATGAGGTGTA<br>TACTCCACAT  | CGGCGACGAG<br>GCCGCTGCTC | GACCTGCTTG<br>CTGGACGAAC | AGCAGGCCAA<br>TCGTCCGGTT |
| 16401 | CGAGCGCCTC<br>GCTCGCGGAG  | GGGGAGTTTG<br>CCCCTCAAAC  | CCTACGGAAA<br>GGATGCCTTT | GCGGCATAAG<br>CGCCGTATTC | GACATGCTGG<br>CTGTACGACC |
| 16451 | CGTTGCCGCT<br>GCAACGGCGA  | GGACGAGGGC<br>CCTGCTCCCC  | AACCCAACAC<br>TTGGGTGTG  | CTAGCCTAAA<br>GATCGGATTT | GCCCGTAACA<br>CGGGCATTGT |
| 16501 | CTGCAGCAGG<br>GACGTCGTCC  | TGCTGCCCCG<br>ACGACGGGCG  | GCTTGCACCG<br>CGAACGTGGC | TCCGAAGAAA<br>AGGCTTCTTT | AGCGCGGCCT<br>TCGCGCCGGA |
| 16551 | AAAGCGCGAG<br>TTTCGCGCTC  | TCTGGTGACT<br>AGACCACTGA  | TGGCACCCAC<br>ACCGTGGGTG | CGTGCAGCTG<br>GCACGTCGAC | ATGGTACCCA<br>TACCATGGGT |
| 16601 | AGCGCCAGCG<br>TCGCGGTCGC  | ACTGGAAGAT<br>TGACCTTCTA  | GTCTTGGA<br>CAGAACCTTT   | AAATGACCGT<br>TTTACTGGCA | GGAACCTGGG<br>CCTTGGACCC |
| 16651 | CTGGAGCCCG<br>GACCTCGGGC  | AGGTCCGCGT<br>TCCAGGCGCA  | GCGGCCAATC<br>CGCCGGTTAG | AAGCAGGTGG<br>TTCGTCCACC | CGCCGGGACT<br>GCGGCCCTGA |
| 16701 | GGGCGTGCAG<br>CCCGCACGTC  | ACCGTGGACG<br>TGGCACCTGC  | TTCAGATACC<br>AAGTCTATGG | CACTACCAGT<br>GTGATGGTCA | AGCACCAGTA<br>TCGTGGTCAT |
| 16751 | TTGCCACCGC<br>AACGGTGGCG  | CACAGAGGGC<br>GTGTCTCCCC  | ATGGAGACAC<br>TACCTCTGTG | AAACGTCCCC<br>TTTGCAGGGG | GGTTGCCTCA<br>CCAACGGAGT |

FIG. 10A-21

|       |             |             |            |            |             |
|-------|-------------|-------------|------------|------------|-------------|
| 16801 | GCGGTGGCGG  | ATGCCGCGGT  | GCAGGCGGTC | GCTGCGGCCG | CGTCCAAGAC  |
|       | CGCCACCGCC  | TACGGCGCCA  | CGTCCGCCAG | CGACGCCGGC | GCAGGTTCTG  |
| 16851 | CTCTACGGAG  | GTGCAAACGG  | ACCCGTGGAT | GTTTCGCGTT | TCAGCCCCCC  |
|       | GAGATGCCTC  | CACGTTTGCC  | TGGGCACCTA | CAAAGCGCAA | AGTCGGGGGG  |
| 16901 | GGCGCCCGCG  | CCGTTCGAGG  | AAGTACGGCG | CCGCCAGCGC | GCTACTGCCC  |
|       | CCGCGGGCGC  | GGCAAGCTCC  | TTCATGCCGC | GGCGGTCGCG | CGATGACGGG  |
| 16951 | GAATATGCCC  | TACATCCTTC  | CATTGCGCCT | ACCCCCGGCT | ATCGTGGCTA  |
|       | CTTATACGGG  | ATGTAGGAAG  | GTAACGCGGA | TGGGGGCCGA | TAGCACCGAT  |
| 17001 | CACCTACCGC  | CCCAGAAGAC  | GAGCAACTAC | CCGACGCCGA | ACCACCACTG  |
|       | GTGGATGGCG  | GGGTCTTCTG  | CTCGTTGATG | GGCTGCGGCT | TGGTGGTGAC  |
| 17051 | GAACCCGCCG  | CCGCCGTCGC  | CGTCGCCAGC | CCGTGCTGGC | CCCGATTTC   |
|       | CTTGGGCGGC  | GGCGGCAGCG  | GCAGCGGTCG | GGCACGACCG | GGGCTAAAGG  |
| 17101 | GTGCGCAGGG  | TGGCTCGCGA  | AGGAGGCAGG | ACCCTGGTGC | TGCCAACAGC  |
|       | CACGCGTCCC  | ACCGAGCGCT  | TCCTCCGTCC | TGGGACCACG | ACGGTTGTCTG |
| 17151 | GCGCTACCAC  | CCCAGCATCG  | TTTAAAAGCC | GGTCTTTGTG | GTTCTTGCAG  |
|       | CGCGATGGTG  | GGGTCGTAGC  | AAATTTTCGG | CCAGAAACAC | CAAGAACGTC  |
| 17201 | ATATGGCCCT  | CACCTGCCGC  | CTCCGTTTCC | CGGTGCCGGG | ATTCCGAGGA  |
|       | TATACCGGGA  | GTGGACGGCG  | GAGGCAAAGG | GCCACGGCCC | TAAGGCTCCT  |
| 17251 | AGAATGCACC  | GTAGGAGGGG  | CATGGCCGGC | CACGGCCTGA | CGGGCGGCAT  |
|       | TCTTACGTGG  | CATCCTCCCC  | GTACCGGCCG | GTGCCGGACT | GCCCGCCGTA  |
| 17301 | GCGTCGTGCG  | CACCACCGGC  | GGCGGCGCGC | GTCGCACCGT | CGCATGCGCG  |
|       | CGCAGCACGC  | GTGGTGGCCG  | CCGCCGCGCG | CAGCGTGGCA | GCGTACGCGC  |
| 17351 | GCGGTATCCT  | GCCCCTCCTT  | ATTCCACTGA | TCGCCGCGGC | GATTGGCGCC  |
|       | CGCCATAGGA  | CGGGGAGGAA  | TAAGGTGACT | AGCGGCGCCG | CTAACCGCGG  |
| 17401 | GTGCCC GGAA | TTGCATCCGT  | GGCCTTGCAG | GCGCAGAGAC | ACTGATTAAA  |
|       | CACGGGCCTT  | AACGTAGGCA  | CCGGAACGTC | CGCGTCTCTG | TGACTAATTT  |
| 17451 | AACAAGTTGC  | ATGTGGAAAA  | ATCAAAATAA | AAAGTCTGGA | CTCTCACGCT  |
|       | TTGTTCAACG  | TACACCTTTT  | TAGTTTTATT | TTTCAGACCT | GAGAGTGCGA  |
| 17501 | CGCTTGGTCC  | TGTAAC TATT | TTGTAGAATG | GAAGACATCA | ACTTTGCGTC  |
|       | GCGAACCAGG  | ACATTGATAA  | AACATCTTAC | CTTCTGTAGT | TGAAACGCAG  |
| 17551 | TCTGGCCCCG  | CGACACGGCT  | CGCGCCCGTT | CATGGGAAAC | TGGCAAGATA  |
|       | AGACCGGGGC  | GCTGTGCCGA  | GCGCGGGCAA | GTACCCTTTG | ACCGTTCTAT  |

FIG. 10A-22

|       |                          |                           |                          |                          |                           |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 17601 | TCGGCACCAG<br>AGCCGTGGTC | CAATATGAGC<br>GTTATACTCG  | GGTGGCGCCT<br>CCACCGCGGA | TCAGCTGGGG<br>AGTCGACCCC | CTCGCTGTGG<br>GAGCGACACC  |
| 17651 | AGCGGCATTA<br>TCGCCGTAAT | AAAATTTTCGG<br>TTTTAAAGCC | TTCCACCGTT<br>AAGGTGGCAA | AAGAACTATG<br>TTCTTGATAC | GCAGCAAGGC<br>CGTCGTTCGG  |
| 17701 | CTGGAACAGC<br>GACCTTGTCG | AGCACAGGCC<br>TCGTGTCCGG  | AGATGCTGAG<br>TCTACGACTC | GGATAAGTTG<br>CCTATTCAAC | AAAGAGCAAA<br>TTTCTCGTTT  |
| 17751 | ATTTCCAACA<br>TAAAGGTTGT | AAAGGTGGTA<br>TTTCCACCAT  | GATGGCCTGG<br>CTACCGGACC | CCTCTGGCAT<br>GGAGACCGTA | TAGCGGGGTG<br>ATCGCCCCAC  |
| 17801 | GTGGACCTGG<br>CACCTGGACC | CCAACCAGGC<br>GGTTGGTCCG  | AGTGCAAAAT<br>TCACGTTTTA | AAGATTAACA<br>TTCTAATTGT | GTAAGCTTGA<br>CATTCGAACT  |
| 17851 | TCCCCGCCCT<br>AGGGGCGGGA | CCCGTAGAGG<br>GGGCATCTCC  | AGCCTCCACC<br>TCGGAGGTGG | GGCCGTGGAG<br>CCGGCACCTC | ACAGTGTCTC<br>TGTCACAGAG  |
| 17901 | CAGAGGGGCG<br>GTCTCCCCGC | TGGCGAAAAG<br>ACCGCTTTTC  | CGTCCGCGCC<br>GCAGGCGCGG | CCGACAGGGA<br>GGCTGTCCCT | AGAAACTCTG<br>TCTTTGAGAC  |
| 17951 | GTGACGCAAA<br>CACTGCGTTT | TAGACGAGCC<br>ATCTGCTCGG  | TCCCTCGTAC<br>AGGGAGCATG | GAGGAGGCAC<br>CTCCTCCGTG | TAAAGCAAGG<br>ATTTTCGTTCC |
| 18001 | CCTGCCCACC<br>GGACGGGTGG | ACCCGTCCCA<br>TGGGCAGGGT  | TCGCGCCCAT<br>AGCGCGGGTA | GGCTACCGGA<br>CCGATGGCCT | GTGCTGGGCC<br>CACGACCCGG  |
| 18051 | AGCACACACC<br>TCGTGTGTGG | CGTAACGCTG<br>GCATTGCGAC  | GACCTGCCTC<br>CTGGACGGAG | CCCCCGCCGA<br>GGGGGCGGCT | CACCCAGCAG<br>GTGGGTCTGC  |
| 18101 | AAACCTGTGC<br>TTTGGACACG | TGCCAGGCCC<br>ACGGTCCGGG  | GACCGCCGTT<br>CTGGCGGCAA | GTTGTAACCC<br>CAACATTGGG | GTCTAGCCG<br>CAGGATCGGC   |
| 18151 | CGCGTCCCTG<br>GCGCAGGGAC | CGCCGCGCCG<br>GCGGCGCGGC  | CCAGCGGTCC<br>GGTCGCCAGG | GCGATCGTTG<br>CGCTAGCAAC | CGGCCCGTAG<br>GCCGGGCATC  |
| 18201 | CCAGTGCGAA<br>GGTCACCGTT | CTGGCAAAGC<br>GACCGTTTCG  | ACACTGAACA<br>TGTGACTTGT | GCATCGTGGG<br>CGTAGCACCC | TCTGGGGGTG<br>AGACCCCCAC  |
| 18251 | CAATCCCTGA<br>GTTAGGGACT | AGCGCCGACG<br>TCGCGGCTGC  | ATGCTTCTGA<br>TACGAAGACT | TAGCTAACGT<br>ATCGATTGCA | GTCGTATGTG<br>CAGCATACAC  |
| 18301 | TGTCATGTAT<br>ACAGTACATA | GCGTCCATGT<br>CGCAGGTACA  | CGCCGCCAGA<br>GCGGCGGTCT | GGAGCTGCTG<br>CCTCGACGAC | AGCCGCCGCG<br>TCGGCGGCGC  |
| 18351 | CGCCCGCTTT<br>GCGGGCGAAA | CCAAGATGGC<br>GGTTCTACCG  | TACCCCTTCG<br>ATGGGGAAGC | ATGATGCCGC<br>TACTACGGCG | AGTGGTCTTA<br>TCACCAGAAT  |

FIG. 10A-23



|       |             |            |             |            |             |
|-------|-------------|------------|-------------|------------|-------------|
| 18401 | CATGCACATC  | TCGGGCCAGG | ACGCCTCGGA  | GTACCTGAGC | CCCGGGCTGG  |
|       | GTACGTGTAG  | AGCCCGGTCC | TGCGGAGCCT  | CATGGACTCG | GGGCCCAGACC |
| 18451 | TGCAGTTTGC  | CCGCGCCACC | GAGACGTACT  | TCAGCCTGAA | TAACAAGTTT  |
|       | ACGTCAAACG  | GGCGCGGTGG | CTCTGCATGA  | AGTCGGACTT | ATTGTTCAAA  |
| 18501 | AGAAACCCCA  | CGGTGGCGCC | TACGCACGAC  | GTGACCACAG | ACCGGTCCCA  |
|       | TCTTTGGGGT  | GCCACCGCGG | ATGCGTGCTG  | CACTGGTGTC | TGGCCAGGGT  |
| 18551 | GCGTTTGACG  | CTGCGGTTCA | TCCCTGTGGA  | CCGTGAGGAT | ACTGCGTACT  |
|       | CGCAAAC TGC | GACGCCAAGT | AGGGACACCT  | GGCACTCCTA | TGACGCATGA  |
| 18601 | CGTACAAGGC  | GCGGTTTACC | CTAGCTGTGG  | GTGATAACCG | TGTGCTGGAC  |
|       | GCATGTTCCG  | CGCCAAGTGG | GATCGACACC  | CACTATTGGC | ACACGACCTG  |
| 18651 | ATGGCTTCCA  | CGTACTTTGA | CATCCGCGGC  | GTGCTGGACA | GGGGCCCTAC  |
|       | TACCGAAGGT  | GCATGAAACT | GTAGGCGCCG  | CACGACCTGT | CCCCGGGATG  |
| 18701 | TTTTAAGCCC  | TACTCTGGCA | CTGCCTACAA  | CGCCCTGGCT | CCCAAGGGTG  |
|       | AAAATTCGGG  | ATGAGACCGT | GACGGATGTT  | GCGGGACCGA | GGGTTCCCAC  |
| 18751 | CCCCAAATCC  | TTGCGAATGG | GATGAAGCTG  | CTACTGCTCT | TGAAATAAAC  |
|       | GGGGTTTAGG  | AACGCTTACC | CTACTTCGAC  | GATGACGAGA | ACTTTATTTG  |
| 18801 | CTAGAAGAAG  | AGGACGATGA | CAACGAAGAC  | GAAGTAGACG | AGCAAGCTGA  |
|       | GATCTTCTTC  | TCCTGCTACT | GTTGCTTCTG  | CTTCATCTGC | TCGTTGCACT  |
| 18851 | GCAGCAAAAA  | ACTCACGTAT | TTGGGCAGGC  | GCCTTATTCT | GGTATAAATA  |
|       | CGTCGTTTTT  | TGAGTGCATA | AACCCGTCCG  | CGGAATAAGA | CCATATTTAT  |
| 18901 | TTACAAAGGA  | GGGTATTCAA | ATAGGTGTCTG | AAGGTCAAAC | ACCTAAATAT  |
|       | AATGTTTCCT  | CCCATAAGTT | TATCCACAGC  | TTCCAGTTTG | TGGATTTATA  |
| 18951 | GCCGATAAAA  | CATTTCAACC | TGAACCTCAA  | ATAGGAGAAT | CTCAGTGGTA  |
|       | CGGCTATTTT  | GTAAAGTTGG | ACTTGAGATT  | TATCCTCTTA | GAGTCACCAT  |
| 19001 | CGAAACAGAA  | ATTAATCATG | CAGCTGGGAG  | AGTCCTAAAA | AAGACTACCC  |
|       | GCTTTGTCTT  | TAATTAGTAC | GTCGACCCTC  | TCAGGATTTT | TTCTGATGGG  |
| 19051 | CAATGAAACC  | ATGTTACGGT | TCATATGCAA  | AACCCACAAA | TGAAAATGGA  |
|       | GTTACTTTGG  | TACAATGCCA | AGTATACGTT  | TTGGGTGTTT | ACTTTTACCT  |
| 19101 | GGGCAAGGCA  | TTCTTGTAAG | GCAACAAAAT  | GGAAAGCTAG | AAAGTCAAGT  |
|       | CCCGTTCCGT  | AAGAACATTT | CGTTGTTTTA  | CCTTTCGATC | TTTCAGTTCA  |
| 19151 | GGAAATGCAA  | TTTTTCTCAA | CTACTGAGGC  | AGCCGCAGGC | AATGGTGATA  |
|       | CCTTTACGTT  | AAAAAGAGTT | GATGACTCCG  | TCGGCGTCCG | TTACCACTAT  |

FIG. 10A-24

|       |                           |                           |                          |                           |                          |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 19201 | ACTTGACTCC<br>TGAAGTGGTA  | TAAAGTGGTA<br>ATTCACCAT   | TTGTACAGTG<br>AACATGTCAC | AAGATGTAGA<br>TTCTACATCT  | TATAGAAACC<br>ATATCTTTGG |
| 19251 | CCAGACACTC<br>GGTCTGTGAG  | ATATTTCTTA<br>TATAAAGAAT  | CATGCCCACT<br>GTACGGGTGA | ATTAAGGAAG<br>TAATTCCTTC  | GTAAGTACAG<br>CATTGAGTGC |
| 19301 | AGAACTAATG<br>TCTTGATTAC  | GGCCAACAAT<br>CCGGTTGTTA  | CTATGCCCAA<br>GATACGGGTT | CAGGCCTAAT<br>GTCCGGATTA  | TACATTGCTT<br>ATGTAACGAA |
| 19351 | TTAGGGACAA<br>AATCCCTGTT  | TTTTATTGGT<br>AAAATAACCA  | CTAATGTATT<br>GATTACATAA | ACAACAGCAC<br>TGTTGTCTGT  | GGGTAATATG<br>CCCATTATAC |
| 19401 | GGTGTCTCTG<br>CCACAAGACC  | CGGGCCAAGC<br>GCCCGGTTCT  | ATCGCAGTTG<br>TAGCGTCAAC | AATGCTGTTG<br>TTACGACAAC  | TAGATTTGCA<br>ATCTAAACGT |
| 19451 | AGACAGAAAC<br>TCTGTCTTTG  | ACAGAGCTTT<br>TGTCTCGAAA  | CATACCAGCT<br>GTATGGTCGA | TTTGCTTGAT<br>AAACGAACCTA | TCCATTGGTG<br>AGGTAACCAC |
| 19501 | ATAGAACCAG<br>TATCTTGGTC  | GTACTTTTCT<br>CATGAAAAGA  | ATGTGGAATC<br>TACACCTTAG | AGGCTGTTGA<br>TCCGACAACCT | CAGCTATGAT<br>GTCGATACTA |
| 19551 | CCAGATGTTA<br>GGTCTACAAT  | GAATTATTGA<br>CTTAATAACT  | AAATCATGGA<br>TTTAGTACCT | ACTGAAGATG<br>TGACTTCTAC  | AACTTCCAAA<br>TTGAAGGTTT |
| 19601 | TTACTGCTTT<br>AATGACGAAA  | CCACTGGGAG<br>GGTGACCCTC  | GTGTGATTAA<br>CACACTAATT | TACAGAGACT<br>ATGTCTCTGA  | CTTACCAAGG<br>GAATGGTTCC |
| 19651 | TAAACCTAA<br>ATTTTGGATT   | AACAGGTCAG<br>TTGTCCAGTC  | GAAAATGGAT<br>CTTTTACCTA | GGGAAAAAGA<br>CCCTTTTTTCT | TGCTACAGAA<br>ACGATGTCTT |
| 19701 | TTTTTCAGATA<br>AAAAGTCTAT | AAAATGAAAT<br>TTTTACTTTA  | AAGAGTTGGA<br>TTCTCAACCT | AATAATTTTG<br>TTATTAAAAC  | CCATGGAAAT<br>GGTACCTTTA |
| 19751 | CAATCTAAAT<br>GTTAGATTTA  | GCCAACCTGT<br>CGGTTGGACA  | GGAGAAATTT<br>CCTCTTTAAA | CCTGTACTCC<br>GGACATGAGG  | AACATAGCGC<br>TTGTATCGCG |
| 19801 | TGTATTTGCC<br>ACATAAACGG  | CGACAAGCTA<br>GCTGTTTCGAT | AAGTACAGTC<br>TTCATGTCAG | CTTCCAACGT<br>GAAGGTTGCA  | AAAAATTTCT<br>TTTTTAAAGA |
| 19851 | GATAACCCAA<br>CTATTGGGTT  | ACACCTACGA<br>TGTGGATGCT  | CTACATGAAC<br>GATGTACTTG | AAGCGAGTGG<br>TTCGCTCACC  | TGGCTCCCGG<br>ACCGAGGGCC |
| 19901 | GCTAGTGGAC<br>CGATCACCTG  | TGCTACATTA<br>ACGATGTAAT  | ACCTTGGAGC<br>TGGAACCTCG | ACGCTGGTCC<br>TGCGACCAGG  | CTTGACTATA<br>GAACTGATAT |
| 19951 | TGGACAACGT<br>ACCTGTTGCA  | CAACCCATTT<br>GTTGGGTAAA  | AACCACCACC<br>TTGGTGGTGG | GCAATGCTGG<br>CGTTACGACC  | CCTGCGCTAC<br>GGACGCGATG |

FIG. 10A-25

|       |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|
| 20001 | CGCTCAATGT  | TGCTGGGCAA  | TGGTCGCTAT  | GTGCCCTTCC  | ACATCCAGGT  |
|       | GCGAGTTACA  | ACGACCCGTT  | ACCAGCGATA  | CACGGGAAGG  | TGTAGGTCCA  |
| 20051 | GCCTCAGAAG  | TTCTTTGCCA  | TTAAAAACCT  | CCTTCTCCTG  | CCGGGCTCAT  |
|       | CGGAGTCTTC  | AAGAAACGGT  | AATTTTGGGA  | GGAAGAGGAC  | GGCCCGAGTA  |
| 20101 | ACACCTACGA  | GTGGAAC TTC | AGGAAGGATG  | TTAACATGGT  | TCTGCAGAGC  |
|       | TGTGGATGCT  | CACCTTGAAG  | TCCTTCCTAC  | AATTGTACCA  | AGACGTCTCG  |
| 20151 | TCCCTAGGAA  | ATGACCTAAG  | GGTTGACGGA  | GCCAGCATTA  | AGTTTGATAG  |
|       | AGGGATCCTT  | TACTGGATTC  | CCAAC TGCCT | CGGTCGTAAT  | TCAAAC TATC |
| 20201 | CATTTGCCTT  | TACGCCACCT  | TCTTCCCCAT  | GGCCCACAAC  | ACCGCCTCCA  |
|       | GTAAACGGAA  | ATGCGGTGGA  | AGAAGGGGTA  | CCGGGTGTTG  | TGGCGGAGGT  |
| 20251 | CGCTTGAGGC  | CATGCTTAGA  | AACGACACCA  | ACGACCAGTC  | CTTTAACGAC  |
|       | GCGAACTCCG  | GTACGAATCT  | TTGCTGTGGT  | TGCTGGTCAG  | GAAATTGCTG  |
| 20301 | TATCTCTCCG  | CCGCCAACAT  | GCTCTACCCT  | ATACCCGCCA  | ACGCTACCAA  |
|       | ATAGAGAGGC  | GGCGGTGTGA  | CGAGATGGGA  | TATGGGCGGT  | TGCGATGGTT  |
| 20351 | CGTGCCCAT A | TCCATCCCCT  | CCCGCAACTG  | GGCGGCTTTC  | CGCGGCTGGG  |
|       | GCACGGGTAT  | AGGTAGGGGA  | GGGCGTTGAC  | CCGCCGAAAG  | GCGCCGACCC  |
| 20401 | CCTTCACGCG  | CCTTAAGACT  | AAGGAAACCC  | CATCACTGGG  | CTCGGGCTAC  |
|       | GGAAGTGCGC  | GGAATTCTGA  | TTCCTTTGGG  | GTAGTGACCC  | GAGCCCGATG  |
| 20451 | GACCC TTATT | ACACCTACTC  | TGGCTCTATA  | CCCTACCTAG  | ATGGAACCTT  |
|       | CTGGGAATAA  | TGTGGATGAG  | ACCGAGATAT  | GGGATGGATC  | TACCTTGGA A |
| 20501 | TTACCTCAAC  | CACACCTTTA  | AGAAGGTGGC  | CATTACCTTT  | GACTCTTCTG  |
|       | AATGGAGTTG  | GTGTGGAAAT  | TCTTCCACCG  | GTAATGGAAA  | CTGAGAAGAC  |
| 20551 | TCAGCTGGCC  | TGGCAATGAC  | CGCCTGCTTA  | CCCCAACGA   | GTTTGAAATT  |
|       | AGTCGACCGG  | ACCGTTACTG  | GCGGACGAAT  | GGGGGTTGCT  | CAAAC TTTAA |
| 20601 | AAGCGCTCAG  | TTGACGGGGA  | GGGTTACAAC  | GTTGCCCAGT  | GTAACATGAC  |
|       | TTGCGGAGTC  | AACTGCCCTT  | CCCAATGTTG  | CAACGGGTCA  | CATTGTACTG  |
| 20651 | CAAAGACTGG  | TTCCTGGTAC  | AAATGCTAGC  | TAAC TATAAC | ATTGGCTACC  |
|       | GTTTCTGACC  | AAGGACCATG  | TTTACGATCG  | ATTGATATTG  | TAACCGATGG  |
| 20701 | AGGGCTTCTA  | TATCC CAGAG | AGCTACAAGG  | ACCGCATGTA  | CTCCTTCTTT  |
|       | TCCCGAAGAT  | ATAGGGTCTC  | TCGATGTTCC  | TGGCGTACAT  | GAGGAAGAAA  |
| 20751 | AGAAACTTCC  | AGCCCATGAG  | CCGTCAGGTG  | GTGGATGATA  | CTAAATACAA  |
|       | TCTTTGAAGG  | TCGGGTACTC  | GGCAGTCCAC  | CACCTACTAT  | GATTTATGTT  |

FIG. 10A-26

|       |            |             |             |            |            |
|-------|------------|-------------|-------------|------------|------------|
| 20801 | GGACTACCAA | CAGGTGGGCA  | TCCTACACCA  | ACACAACAAC | TCTGGATTTG |
|       | CCTGATGGTT | GTCCACCCGT  | AGGATGTGGT  | TGTGTTGTTG | AGACCTAAAC |
| 20851 | TTGGCTACCT | TGCCCCCACC  | ATGCGCGAAG  | GACAGGCCTA | CCCTGCTAAC |
|       | AACCGATGGA | ACGGGGGTGG  | TACGCGCTTC  | CTGTCCGGAT | GGGACGATTG |
| 20901 | TTCCCCTATC | CGCTTATAGG  | CAAGACCGCA  | GTTGACAGCA | TTACCCAGAA |
|       | AAGGGGATAG | GCGAATATCC  | GTTCTGGCGT  | CAACTGTTCG | AATGGGTCTT |
| 20951 | AAAGTTTCTT | TGCGATCGCA  | CCCTTTGGCG  | CATCCCATTG | TCCAGTAACT |
|       | TTTCAAAGAA | ACGCTAGCGT  | GGGAAACCGC  | GTAGGGTAAG | AGGTCATTGA |
| 21001 | TTATGTCCAT | GGGCGCACTC  | ACAGACCTGG  | GCCAAAACCT | TCTCTACGCC |
|       | AATACAGGTA | CCCGCGTGAG  | TGTCTGGACC  | CGGTTTTGGA | AGAGATGCGG |
| 21051 | AACTCCGCCC | ACGCGCTAGA  | CATGACTTTT  | GAGGTGGATC | CCATGGACGA |
|       | TTGAGGCGGG | TGCGCGATCT  | GTA CTGAAAA | CTCCACCTAG | GGTACCTGCT |
| 21101 | GCCCACCCTT | CTTTATGTTT  | TGTTTGAAGT  | CTTTGACGTG | GTCCGTGTGC |
|       | CGGGTGGGAA | GAAATACAAA  | ACAAACTTCA  | GAAACTGCAC | CAGGCACACG |
| 21151 | ACCAGCCGCA | CCGCGGCGTC  | ATCGAAACCG  | TGTACCTGCG | CACGCCCTTC |
|       | TGGTCGGCGT | GGCGCCGCAG  | TAGCTTTGGC  | ACATGGACGC | GTGCGGGAAG |
| 21201 | TCGGCCGGCA | ACGCCACAAC  | ATAAAGAAGC  | AAGCAACATC | AACAACAGCT |
|       | AGCCGGCCGT | TGCGGTGTTG  | TATTTCTTCG  | TTCGTTGTAG | TTGTTGTCGA |
| 21251 | GCCGCCATGG | GCTCCAGTGA  | GCAGGAACTG  | AAAGCCATTG | TCAAAGATCT |
|       | CGGCGGTACC | CGAGGTCACT  | CGTCCTTGAC  | TTTCGGTAAC | AGTTTCTAGA |
| 21301 | TGGTTGTGGG | CCATATTTTT  | TGGGCACCTA  | TGACAAGCGC | TTTCCAGGCT |
|       | ACCAACACCC | GGTATAAAAA  | ACCCGTGGAT  | ACTGTTTCGC | AAAGGTCCGA |
| 21351 | TTGTTTCTCC | ACACAAGCTC  | GCCTGCGCCA  | TAGTCAATAC | GGCCGGTCGC |
|       | AACAAAGAGG | TGTGTTTCGAG | CGGACGCGGT  | ATCAGTTATG | CCGGCCAGCG |
| 21401 | GAGACTGGGG | GCGTACACTG  | GATGGCCTTT  | GCCTGGAACC | CGCACTCAAA |
|       | CTCTGACCCC | CGCATGTGAC  | CTACCGGAAA  | CGGACCTTGG | GCGTGAGTTT |
| 21451 | AACATGCTAC | CTCTTTGAGC  | CCTTTGGCTT  | TTCTGACCAG | CGACTCAAGC |
|       | TTGTACGATG | GAGAAACTCG  | GGAAACCGAA  | AAGACTGGTC | GCTGAGTTTC |
| 21501 | AGGTTTACCA | GTTTGAGTAC  | GAGTCACTCC  | TGCGCCGTAG | CGCCATTGCT |
|       | TCCAAATGGT | CAAAC TCATG | CTCAGTGAGG  | ACGCGGCATC | GCGGTAACGA |
| 21551 | TCTTCCCCCG | ACCGCTGTAT  | AACGCTGGAA  | AAGTCCACCC | AAAGCGTACA |
|       | AGAAGGGGGC | TGGCGACATA  | TTGCGACCTT  | TTCAGGTGGG | TTTCGCATGT |

FIG. 10A-27

|       |                           |                           |                          |                          |                          |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 21601 | GGGGCCCAAC<br>CCCCGGGTTG  | TCGGCCGCCT<br>AGCCGGCGGA  | GTGGACTATT<br>CACCTGATAA | CTGCTGCATG<br>GACGACGTAC | TTTCTCCACG<br>AAAGAGGTGC |
| 21651 | CCTTTGCCAA<br>GGAAACGGTT  | CTGGCCCCAA<br>GACCGGGGTT  | ACTCCCATGG<br>TGAGGGTACC | ATCACAACCC<br>TAGTGTTGGG | CACCATGAAC<br>GTGGTACTTG |
| 21701 | CTTATTACCG<br>GAATAATGGC  | GGGTACCCAA<br>CCCATGGGTT  | CTCCATGCTC<br>GAGGTACGAG | AACAGTCCCC<br>TTGTCAGGGG | AGGTACAGCC<br>TCCATGTCGG |
| 21751 | CACCCTGCGT<br>GTGGGACGCA  | CGCAACCAGG<br>GCGTTGGTCC  | AACAGCTCTA<br>TTGTCGAGAT | CAGCTTCCTG<br>GTCGAAGGAC | GAGCGCCACT<br>CTCGCGGTGA |
| 21801 | CGCCCTACTT<br>GCGGGATGAA  | CCGCAGCCAC<br>GGCGTCGGTG  | AGTGCGCAGA<br>TCACGCGTCT | TTAGGAGCGC<br>AATCCTCGCG | CACTTCTTTT<br>GTGAAGAAAA |
| 21851 | TGTCACTTGA<br>ACAGTGAAC   | AAAACATGTA<br>TTTTGTACAT  | AAAATAATGT<br>TTTTATTACA | ACTAGAGACA<br>TGATCTCTGT | CTTTCAATAA<br>GAAAGTTATT |
| 21901 | AGGCAAATGC<br>TCCGTTTACG  | TTTTATTTGT<br>AAAATAAACA  | AACTCTCGG<br>TGTGAGAGCC  | GTGATTATTT<br>CACTAATAAA | ACCCCCACCC<br>TGGGGGTGGG |
| 21951 | TTGCCGTCTG<br>AACGGCAGAC  | CGCCGTTTAA<br>GCGGCAAATT  | AAATCAAAGG<br>TTTAGTTTCC | GGTCTGCCG<br>CCAAGACGGC  | CGCATCGCTA<br>GCGTAGCGAT |
| 22001 | TGCGCCACTG<br>ACGCGGTGAC  | GCAGGGACAC<br>CGTCCCTGTG  | GTTGCGATAC<br>CAACGCTATG | TGGTGTTTAG<br>ACCACAAATC | TGCTCCACTT<br>ACGAGGTGAA |
| 22051 | AAACTCAGGC<br>TTTGAGTCCG  | ACAACCATCC<br>TGTTGGTAGG  | GCGGCAGCTC<br>CGCCGTCGAG | GGTGAAGTTT<br>CCACTTCAAA | TCACTCCACA<br>AGTGAGGTGT |
| 22101 | GGCTGCGCAC<br>CCGACGCGTG  | CATCACCAAC<br>GTAGTGGTTG  | GCGTTTAGCA<br>CGAAATCGT  | GGTCGGGCGC<br>CCAGCCCGCG | CGATATCTTG<br>GCTATAGAAC |
| 22151 | AAGTCGCAGT<br>TTCAGCGTCA  | TGGGGCCTCC<br>ACCCCGGAGG  | GCCCTGCGCG<br>CGGGACGCGC | CGCGAGTTGC<br>GCGCTCAACG | GATACACAGG<br>CTATGTGTCC |
| 22201 | GTTGCAGCAC<br>CAACGTCGTG  | TGGAACACTA<br>ACCTTGTTGAT | TCAGCGCCGG<br>AGTCGCGGCC | GTGGTGCACG<br>CACCACGTGC | CTGGCCAGCA<br>GACCGGTCGT |
| 22251 | CGCTCTTGTC<br>GCGAGAACAG  | GGAGATCAGA<br>CCTCTAGTCT  | TCCGCGTCCA<br>AGGCGCAGGT | GGTCCTCCGC<br>CCAGGAGGCG | GTTGCTCAGG<br>CAACGAGTCC |
| 22301 | GCGAACGGAG<br>CGCTTGCCCTC | TCAACTTTGG<br>AGTTGAAACC  | TAGCTGCCTT<br>ATCGACGGAA | CCCAAAAAGG<br>GGGTTTTTCC | GCGCGTGCCC<br>CGCGCACGGG |
| 22351 | AGGCTTTGAG<br>TCCGAAACTC  | TTGCACTCGC<br>AACGTGAGCG  | ACCGTAGTGG<br>TGGCATCACC | CATCAAAAGG<br>GTAGTTTTCC | TGACCGTGCC<br>ACTGGCACGG |

FIG. 10A-28

|       |            |            |            |            |             |
|-------|------------|------------|------------|------------|-------------|
| 22401 | CGGTCTGGGC | GTTAGGATAC | AGCGCCTGCA | TAAAAGCCTT | GATCTGCTTA  |
|       | GCCAGACCCG | CAATCCTATG | TCGCGGACGT | ATTTTCGGAA | CTAGACGAAT  |
| 22451 | AAAGCCACCT | GAGCCTTTGC | GCCTTCAGAG | AAGAACATGC | CGCAAGACTT  |
|       | TTTCGGTGGA | CTCGGAAACG | CGGAAGTCTC | TTCTTGTACG | GCGTTCTGAA  |
| 22501 | GCCGGAAAAC | TGATTGGCCG | GACAGGCCGC | GTCGTGCACG | CAGCACCTTG  |
|       | CGGCCTTTTG | ACTAACCGGC | CTGTCCGGCG | CAGCACGTGC | GTCGTGGAAC  |
| 22551 | CGTCGGTGTT | GGAGATCTGC | ACCACATTTT | GGCCCCACCG | GTTCTTCACG  |
|       | GCAGCCACAA | CCTCTAGACG | TGGTGTAAG  | CCGGGGTGGC | CAAGAAGTGC  |
| 22601 | ATCTTGGCCT | TGCTAGACTG | CTCCTTCAGC | GCGCGCTGCC | CGTTTTTCGCT |
|       | TAGAACCGGA | ACGATCTGAC | GAGGAAGTCG | CGCGCGACGG | GCAAAAGCGA  |
| 22651 | CGTCACATCC | ATTTCAATCA | CGTGCTCCTT | ATTTATCATA | ATGCTTCCGT  |
|       | GCAGTGTAGG | TAAAGTTAGT | GCACGAGGAA | TAAATAGTAT | TACGAAGGCA  |
| 22701 | GTAGACACTT | AAGCTCGCCT | TCGATCTCAG | CGCAGCGGTG | CAGCCACAAC  |
|       | CATCTGTGAA | TTCGAGCGGA | AGCTAGAGTC | GCGTCGCCAC | GTCGGTGTTG  |
| 22751 | GCGCAGCCCG | TGGGCTCGTG | ATGCTTGTAG | GTCACCTCTG | CAAACGACTG  |
|       | CGCGTCGGGC | ACCCGAGCAC | TACGAACATC | CAGTGGAGAC | GTTTGCTGAC  |
| 22801 | CAGGTACGCC | TGCAGGAATC | GCCCCATCAT | CGTCACAAAG | GTCTTGTTGC  |
|       | GTCCATGCGG | ACGTCCTTAG | CGGGGTAGTA | GCAGTGTTTC | CAGAACAACG  |
| 22851 | TGGTGAAGGT | CAGCTGCAAC | CCGCGGTGCT | CCTCGTTCAG | CCAGGTCTTG  |
|       | ACCACTTCCA | GTCGACGTTG | GGCGCCACGA | GGAGCAAGTC | GGTCCAGAAC  |
| 22901 | CATACGGCCG | CCAGAGCTTC | CACTTGGTCA | GGCAGTAGTT | TGAAGTTCGC  |
|       | GTATGCCGGC | GGTCTCGAAG | GTGAACCAGT | CCGTCATCAA | ACTTCAAGCG  |
| 22951 | CTTTAGATCG | TTATCCACGT | GGTACTTGTC | CATCAGCGCG | CGCGCAGCCT  |
|       | GAAATCTAGC | AATAGGTGCA | CCATGAACAG | GTAGTCGCGC | GCGCGTCGGA  |
| 23001 | CCATGCCCTT | CTCCCACGCA | GACACGATCG | GCACACTCAG | CGGGTTCATC  |
|       | GGTACGGGAA | GAGGGTGCGT | CTGTGCTAGC | CGTGTGAGTC | GCCCAAGTAG  |
| 23051 | ACCGTAATTT | CACTTTCCGC | TTCGCTGGGC | TCTTCCTCTT | CCTCTTGCGT  |
|       | TGGCATTAAT | GTGAAAGGCG | AAGCGACCCG | AGAAGGAGAA | GGAGAACGCA  |
| 23101 | CCGCATACCA | CGCGCCACTG | GGTCGTCTTC | ATTCAGCCGC | CGCACTGTGC  |
|       | GGCGTATGGT | GCGCGGTGAC | CCAGCAGAAG | TAAGTCGGCG | GCGTGACACG  |
| 23151 | GCTTACCTCC | TTTGCCATGC | TTGATTAGCA | CCGGTGGGTT | GCTGAAACCC  |
|       | CGAATGGAGG | AAACGGTACG | AACTAATCGT | GGCCACCCAA | CGACTTTGGG  |

FIG. 10A-29

|       |                           |                           |                           |                          |                          |
|-------|---------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| 23201 | ACCATTTGTA<br>TGGTAAACAT  | GCGCCACATC<br>CGCGGTGTAG  | TTCTCTTTCT<br>AAGAGAAAGA  | TCCTCGCTGT<br>AGGAGCGACA | CCACGATTAC<br>GGTGCTAATG |
| 23251 | CTCTGGTGAT<br>GAGACCACTA  | GGCGGGCGCT<br>CCGCCCCGCGA | CGGGCTTGGG<br>GCCCGAACCC  | AGAAGGGCGC<br>TCTTCCCGCG | TTCTTTTTCT<br>AAGAAAAAGA |
| 23301 | TCTTGGGCGC<br>AGAACCCGCG  | AATGGCCAAA<br>TTACCGGTTT  | TCCGCCGCCG<br>AGGCGGCGGC  | AGGTCGATGG<br>TCCAGCTACC | CCGCGGGCTG<br>GGCGCCCGAC |
| 23351 | GGTGTGCGCG<br>CCACACGCGC  | GCACCAGCGC<br>CGTGGTTCGCG | GTCTTGATGAT<br>CAGAACACTA | GAGTCTTCCT<br>CTCAGAAGGA | CGTCCTCGGA<br>GCAGGAGCCT |
| 23401 | CTCGATACGC<br>GAGCTATGCG  | CGCCTCATCC<br>GCGGAGTAGG  | GCTTTTTTTGG<br>CGAAAAAACC | GGGCGCCCGG<br>CCCGCGGGCC | GGAGGCGGCG<br>CCTCCGCCGC |
| 23451 | GCGACGGGGA<br>CGCTGCCCT   | CGGGGACGAC<br>GCCCCTGCTG  | ACGTCCTCCA<br>TGCAGGAGGT  | TGGTTGGGGG<br>ACCAACCCCC | ACGTCGCGCC<br>TGCAGCGCGG |
| 23501 | GCACCGCGTC<br>CGTGGCGCAG  | CGCGCTCGGG<br>GCGCGAGCCC  | GGTGGTTTCG<br>CCACCAAAGC  | CGCTGCTCCT<br>GCGACGAGGA | CTTCCCGACT<br>GAAGGGCTGA |
| 23551 | GGCCATTTCC<br>CCGGTAAAGG  | TTCTCCTATA<br>AAGAGGATAT  | GGCAGAAAAA<br>CCGTCTTTTT  | GATCATGGAG<br>CTAGTACCTC | TCAGTCGAGA<br>AGTCAGCTCT |
| 23601 | AGAAGGACAG<br>TCTTCCTGTC  | CCTAACCGCC<br>GGATTGGCGG  | CCCTCTGAGT<br>GGGAGACTCA  | TCGCCACCAC<br>AGCGGTGGTG | CGCCTCCACC<br>GCGGAGGTGG |
| 23651 | GATGCCGCCA<br>CTACGGCGGT  | ACGCGCCTAC<br>TGCGCGGATG  | CACCTTCCCC<br>GTGGAAGGGG  | GTCGAGGCAC<br>CAGCTCCGTG | CCCCGCTTGA<br>GGGGCGAACT |
| 23701 | GGAGGAGGAA<br>CCTCCTCCTT  | GTGATTATCG<br>CACTAATAGC  | AGCAGGACCC<br>TCGTCTGGG   | AGGTTTTGTA<br>TCCAAAACAT | AGCGAAGACG<br>TCGCTTCTGC |
| 23751 | ACGAGGACCG<br>TGCTCCTGGC  | CTCAGTACCA<br>GAGTCATGGT  | ACAGAGGATA<br>TGTCTCCTAT  | AAAAGCAAGA<br>TTTTCGTTCT | CCAGGACAAC<br>GGTCCTGTTG |
| 23801 | GCAGAGGCAA<br>CGTCTCCGTT  | ACGAGGAACA<br>TGCTCCTTGT  | AGTCGGGCGG<br>TCAGCCCGCC  | GGGGACGAAA<br>CCCCTGCTTT | GGCATGGCGA<br>CCGTACCGCT |
| 23851 | CTACCTAGAT<br>GATGGATCTA  | GTGGGAGACG<br>CACCTCTGCG  | ACGTGCTGTT<br>TGCACGACAA  | GAAGCATCTG<br>CTTCGTAGAC | CAGCGCCAGT<br>GTCGCGGTCA |
| 23901 | GCGCCATTAT<br>CGCGGTAAATA | CTGCGACGCG<br>GACGCTGCGC  | TTGCAAGAGC<br>AACGTTCTCG  | GCAGCGATGT<br>CGTCGCTACA | GCCCCTCGCC<br>CGGGGAGCGG |
| 23951 | ATAGCGGATG<br>TATCGCCTAC  | TCAGCCTTGC<br>AGTCGGAACG  | CTACGAACGC<br>GATGCTTGCG  | CACCTATTCT<br>GTGGATAAGA | CACCGCGCGT<br>GTGGCGCGCA |

FIG. 10A-30

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 24001 | ACCCCCCAA  | CGCCAAGAAA | ACGGCACATG | CGAGCCCAAC | CCGCGCCTCA |
|       | TGGGGGGTTT | GCGGTTCTTT | TGCCGTGTAC | GCTCGGGTTG | GGCGCGGAGT |
| 24051 | ACTTCTACCC | CGTATTTGCC | GTGCCAGAGG | TGCTTGCCAC | CTATCACATC |
|       | TGAAGATGGG | GCATAAACGG | CACGGTCTCC | ACGAACGGTG | GATAGTGTAG |
| 24101 | TTTTTCCAAA | ACTGCAAGAT | ACCCCTATCC | TGCCGTGCCA | ACCGCAGCCG |
|       | AAAAAGGTTT | TGACGTTCTA | TGGGGATAGG | ACGGCACGGT | TGGCGTCGGC |
| 24151 | AGCGGACAAG | CAGCTGGCCT | TGCGGCAGGG | CGCTGTCATA | CCTGATATCG |
|       | TCGCCTGTTC | GTCGACCGGA | ACGCCGTCCC | GCGACAGTAT | GGACTATAGC |
| 24201 | CCTCGCTCAA | CGAAGTGCCA | AAAATCTTTG | AGGGTCTTGG | ACGCGACGAG |
|       | GGAGCGAGTT | GCTTCACGGT | TTTTAGAAAC | TCCCAGAACC | TGCGCTGCTC |
| 24251 | AAGCGCGCGG | CAAACGCTCT | GCAACAGGAA | AACAGCGAAA | ATGAAAGTCA |
|       | TTCGCGCGCC | GTTTGCGAGA | CGTTGTCCTT | TTGTCGCTTT | TACTTTCAGT |
| 24301 | CTCTGGAGTG | TTGGTGGAAC | TCGAGGGTGA | CAACGCGCGC | CTAGCCGTAC |
|       | GAGACCTCAC | AACCACCTTG | AGCTCCCACT | GTTGCGCGCG | GATCGGCATG |
| 24351 | TAAACGCAG  | CATCGAGGTC | ACCCACTTTG | CCTACCCGGC | ACTTAACCTA |
|       | ATTTTGCGTC | GTAGCTCCAG | TGGGTGAAAC | GGATGGGCCG | TGAATTGGAT |
| 24401 | CCCCCCAAGG | TCATGAGCAC | AGTCATGAGT | GAGCTGATCG | TGCGCCGTGC |
|       | GGGGGGTTCC | AGTACTCGTG | TCAGTACTCA | CTCGACTAGC | ACGCGGCACG |
| 24451 | GCAGCCCCTG | GAGAGGGATG | CAAATTTGCA | AGAACAAACA | GAGGAGGGCC |
|       | CGTCGGGGAC | CTCTCCCTAC | GTTTAAACGT | TCTTGTTTGT | CTCCTCCCGG |
| 24501 | TACCCGCAGT | TGGCGACGAG | CAGCTAGCGC | GCTGGCTTCA | AACGCGCGAG |
|       | ATGGGCGTCA | ACCGCTGCTC | GTCGATCGCG | CGACCGAAGT | TTGCGCGCTC |
| 24551 | CCTGCCGACT | TGGAGGAGCG | ACGCAAATA  | ATGATGGCCG | CAGTGCTCGT |
|       | GGACGGCTGA | ACCTCCTCGC | TGCGTTTGAT | TACTACCGGC | GTCACGAGCA |
| 24601 | TACCGTGGAG | CTTGAGTGCA | TGCAGCGGTT | CTTTGCTGAC | CCGGAGATGC |
|       | ATGGCACCTC | GAACACACGT | ACGTCGCCAA | GAAACGACTG | GGCCTCTACG |
| 24651 | AGCGCAAGCT | AGAGGAAACA | TTGCACTACA | CCTTTCGACA | GGGCTACGTA |
|       | TCGCGTTCGA | TCTCCTTTGT | AACGTGATGT | GGAAAGCTGT | CCCGATGCAT |
| 24701 | CGCCAGGCCT | GCAAGATCTC | CAACGTGGAG | CTCTGCAACC | TGGTCTCCTA |
|       | GCGGTCCGGA | CGTTCTAGAG | GTTGCACCTC | GAGACGTTGG | ACCAGAGGAT |
| 24751 | CCTTGGAATT | TTGCACGAAA | ACCGCCTTGG | GCAAAACGTG | CTTCATTCCA |
|       | GGAACCTTAA | AACGTGCTTT | TGGCGGAACC | CGTTTTGCAC | GAAGTAAGGT |

FIG. 10A-31



|       |            |            |             |            |            |
|-------|------------|------------|-------------|------------|------------|
| 24801 | CGCTCAAGGG | CGAGGCGCGC | CGCGACTACG  | TCCGCGACTG | CGTTTACTTA |
|       | GCGAGTTCCC | GCTCCGCGCG | GCGCTGATGC  | AGGCGCTGAC | GCAAATGAAT |
| 24851 | TTTCTATGCT | ACACCTGGCA | GACGGCCATG  | GGCGTTTGGC | AGCAGTGCTT |
|       | AAAGATACGA | TGTGGACCGT | CTGCCGGTAC  | CCGCAAACCG | TCGTCACGAA |
| 24901 | GGAGGAGTGC | AACCTCAAGG | AGCTGCAGAA  | ACTGCTAAAG | CAAAACTTGA |
|       | CCTCCTCACG | TTGGAGTTCC | TCGACGTCTT  | TGACGATTTC | GTTTTGAACT |
| 24951 | AGGACCTATG | GACGGCCTTC | AACGAGCGCT  | CCGTGGCCGC | GCACCTGGCG |
|       | TCCTGGATAC | CTGCCGGAAG | TTGCTCGCGA  | GGCACCGGCG | CGTGGACCGC |
| 25001 | GACATCATT  | TCCCCGAACG | CCTGCTTAAA  | ACCCTGCAAC | AGGGTCTGCC |
|       | CTGTAGTAAA | AGGGGCTTGC | GGACGAATTT  | TGGGACGTTG | TCCCAGACGG |
| 25051 | AGACTTCACC | AGTCAAAGCA | TGTTGCAGAA  | CTTTAGGAAC | TTTATCCTAG |
|       | TCTGAAGTGG | TCAGTTTCGT | ACAACGTCTT  | GAAATCCTTG | AAATAGGATC |
| 25101 | AGCGCTCAGG | AATCTTGCCC | GCCACCTGCT  | GTGCACTTCC | TAGCGACTTT |
|       | TCGCGAGTCC | TTAGAACGGG | CGGTGGACGA  | CACGTGAAGG | ATCGCTGAAA |
| 25151 | GTGCCCATTA | AGTACCGCGA | ATGCCCTCCG  | CCGCTTTGGG | GCCACTGCTA |
|       | CACGGGTAAT | TCATGGCGCT | TACGGGAGGC  | GGCGAAACCC | CGGTGACGAT |
| 25201 | CCTTCTGCAG | CTAGCCAACT | ACCTTGCCTA  | CCACTCTGAC | ATAATGGAAG |
|       | GGAAGACGTC | GATCGGTTGA | TGGAACGGAT  | GGTGAGACTG | TATTACCTTC |
| 25251 | ACGTGAGCGG | TGACGGTCTA | CTGGAGTGTC  | ACTGTGCTG  | CAACCTATGC |
|       | TGCACTCGCC | ACTGCCAGAT | GACCTCACAG  | TGACAGCGAC | GTTGGATACG |
| 25301 | ACCCCGCACC | GCTCCCTGGT | TTGCAATTTCG | CAGCTGCTTA | ACGAAAGTCA |
|       | TGGGGCGTGG | CGAGGGACCA | AACGTTAAGC  | GTCGACGAAT | TGCTTTCAGT |
| 25351 | AATTATCGGT | ACCTTTGAGC | TGCAGGGTCC  | CTCGCCTGAC | GAAAAGTCCG |
|       | TTAATAGCCA | TGGAAACTCG | ACGTCCCAGG  | GAGCGGACTG | CTTTTCAGGC |
| 25401 | CGGCTCCGGG | GTTGAAACTC | ACTCCGGGGC  | TGTGGACGTC | GGCTTACCTT |
|       | GCCGAGGCC  | CAACTTTGAG | TGAGGCCCCG  | ACACCTGCAG | CCGAATGGAA |
| 25451 | CGCAAATTTG | TACCTGAGGA | CTACCACGCC  | CACGAGATTA | GGTTCTACGA |
|       | GCGTTTAAAC | ATGGACTCCT | GATGGTGCGG  | GTGCTCTAAT | CCAAGATGCT |
| 25501 | AGACCAATCC | CGCCCGCCTA | ATGCGGAGCT  | TACCGCCTGC | GTCATTACCC |
|       | TCTGGTTAGG | GCGGGCGGAT | TACGCCTCGA  | ATGGCGGACG | CAGTAATGGG |
| 25551 | AGGGCCACAT | TCTTGGCCAA | TTGCAAGCCA  | TCAACAAAGC | CCGCCAAGAG |
|       | TCCCGGTGTA | AGAACCGGTT | AACGTTCCGT  | AGTTGTTTCG | GGCGGTTCTC |

FIG. 10A-32

|       |                          |                           |                          |                           |                          |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 25601 | TTTCTGCTAC<br>AAAGACGATG | GAAAGGGACG<br>CTTTCCTG    | GGGGGTTTAC<br>CCCCCAAATG | TTGGACCCCC<br>AACCTGGGGG  | AGTCCGGCGA<br>TCAGGCCGCT |
| 25651 | GGAGCTCAAC<br>CCTCGAGTTG | CCAATCCCCC<br>GGTTAGGGGG  | CGCCGCCGCA<br>GCGGCGGCGT | GCCCTATCAG<br>CGGGATAGTC  | CAGCAGCCGC<br>GTCGTCGGCG |
| 25701 | GGGCCCTTGC<br>CCCGGGAACG | TTCCCAGGAT<br>AAGGGTCCTA  | GGCACCCAAA<br>CCGTGGGTTT | AAGAAGCTGC<br>TTCTTCGACG  | AGCTGCCGCC<br>TCGACGGCGG |
| 25751 | GCCACCCACG<br>CGGTGGGTGC | GACGAGGAGG<br>CTGCTCCTCC  | AATACTGGGA<br>TTATGACCCT | CAGTCAGGCA<br>GTCAGTCCGT  | GAGGAGGTTT<br>CTCCTCCAAA |
| 25801 | TGGACGAGGA<br>ACCTGCTCCT | GGAGGAGGAC<br>CCTCCTCCTG  | ATGATGGAAG<br>TACTACCTTC | ACTGGGAGAG<br>TGACCCTCTC  | CCTAGACGAG<br>GGATCTGCTC |
| 25851 | GAAGCTTCCG<br>CTTCGAAGGC | AGGTCGAAGA<br>TCCAGCTTCT  | GGTGTCTAGC<br>CCACAGTCTG | GAAACACCGT<br>CTTTGTGGCA  | CACCCTCGGT<br>GTGGGAGCCA |
| 25901 | CGCATTCCCC<br>GCGTAAGGGG | TCGCCGGCGC<br>AGCGGCCGCG  | CCCAGAAATC<br>GGGTCTTTAG | GGCAACCGGT<br>CCGTGCGCCA  | TCCAGCATGG<br>AGGTCGTACC |
| 25951 | CTACAACCTC<br>GATGTTGGAG | CGCTCCTCAG<br>GCGAGGAGTC  | GCGCCGCCGG<br>CGCGGCGGCC | CACTGCCCCGT<br>GTGACGGGCA | TCGCCGACCC<br>AGCGGCTGGG |
| 26001 | AACCGTAGAT<br>TTGGCATCTA | GGGACACCAC<br>CCCTGTGGTG  | TGGAACCAGG<br>ACCTTGGTCC | GCCGGTAAGT<br>CGGCCATTCA  | CCAAGCAGCC<br>GGTTCGTCGG |
| 26051 | GCCGCCGTTA<br>CGGCGGCAAT | GCCCAAGAGC<br>CGGGTTCTCG  | AACAACAGCG<br>TTGTTGTCGC | CCAAGGCTAC<br>GGTTCCGATG  | CGCTCATGGC<br>GCGAGTACCG |
| 26101 | GCGGGCACAA<br>CGCCCGTGTT | GAACGCCATA<br>CTTGCGGTAT  | GTTGCTTGCT<br>CAACGAACGA | TGCAAGACTG<br>ACGTTCTGAC  | TGGGGGCAAC<br>ACCCCGTTG  |
| 26151 | ATCTCCTTCG<br>TAGAGGAAGC | CCCGCCGCTT<br>GGGCGGCGAA  | TCTTCTCTAC<br>AGAAGAGATG | CATCACGGCG<br>GTAGTGCCGC  | TGGCCTTCCC<br>ACCGGAAGGG |
| 26201 | CCGTAACATC<br>GGCATTGTAG | CTGCATTACT<br>GACGTAATGA  | ACCGTCATCT<br>TGGCAGTAGA | CTACAGCCCA<br>GATGTCGGGT  | TACTGCACCG<br>ATGACGTGGC |
| 26251 | GCGGCAGCGG<br>CGCCGTCGCC | CAGCAACAGC<br>GTCGTTGTCTG | AGCGGCCACA<br>TCGCCGGTGT | CAGAAGCAAA<br>GTCTTCGTTT  | GGCGACCGGA<br>CCGCTGGCCT |
| 26301 | TAGCAAGACT<br>ATCGTTCTGA | CTGACAAAGC<br>GACTGTTTCG  | CCAAGAAATC<br>GGTTCTTTAG | CACAGCGGCG<br>GTGTCGCCGC  | GCAGCAGCAG<br>CGTCGTCGTC |
| 26351 | GAGGAGGAGC<br>CTCCTCCTCG | GCTGCGTCTG<br>CGACGCAGAC  | GCGCCCAACG<br>CGCGGGTTGC | AACCCGTATC<br>TTGGGCATAG  | GACCCGCGAG<br>CTGGGCGCTC |

FIG. 10A-33

|       |                           |                          |                           |                           |                           |
|-------|---------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 26401 | CTTAGAAACA<br>GAATCTTTGT  | GGATTTTTC<br>CCTAAAAAGG  | CACTCTGTAT<br>GTGAGACATA  | GCTATATTTTC<br>CGATATAAAG | AACAGAGCAG<br>TTGTCTCGTC  |
| 26451 | GGGCCAAGAA<br>CCCGGTTCCTT | CAAGAGCTGA<br>GTTCTCGACT | AAATAAAAAA<br>TTTATTTTTT  | CAGGTCTCTG<br>GTCCAGAGAC  | CGATCCCTCA<br>GCTAGGGAGT  |
| 26501 | CCCGCAGCTG<br>GGGCGTCGAC  | CCTGTATCAC<br>GGACATAGTG | AAAAGCGAAG<br>TTTTCGCTTC  | ATCAGCTTTCG<br>TAGTCGAAGC | GCGCACGCTG<br>CGCGTGCGAC  |
| 26551 | GAAGACGCGG<br>CTTCTGCGCC  | AGGCTCTCTT<br>TCCGAGAGAA | CAGTAAATAC<br>GTCATTTATG  | TGCGCGCTGA<br>ACGCGCGACT  | CTCTTAAGGA<br>GAGAATTCCT  |
| 26601 | CTAGTTTTCG<br>GATCAAAGCG  | GCCCTTTCTC<br>CGGGAAAGAG | AAATTTAAGC<br>TTTAAATTTCG | GCGAAAACATA<br>CGCTTTTGAT | CGTCATCTCC<br>GCAGTAGAGG  |
| 26651 | AGCGGCCACA<br>TCGCCGGTGT  | CCCGGCGCCA<br>GGGCCGCGGT | GCACCTGTTG<br>CGTGGACAAC  | TCAGCGCCAT<br>AGTCGCGGTA  | TATGAGCAAG<br>ATACTCGTTC  |
| 26701 | GAAATTCCCA<br>CTTTAAGGGT  | CGCCCTACAT<br>GCGGGATGTA | GTGGAGTTAC<br>CACCTCAATG  | CAGCCACAAA<br>GTCGGTGTTT  | TGGGACTTGC<br>ACCCTGAACG  |
| 26751 | GGCTGGAGCT<br>CCGACCTCGA  | GCCCAAGACT<br>CGGGTTCTGA | ACTCAACCCG<br>TGAGTTGGGC  | AATAAACTAC<br>TTATTTGATG  | ATGAGCGCGG<br>TACTCGCGCC  |
| 26801 | GACCCACAT<br>CTGGGGTGTA   | GATATCCCGG<br>CTATAGGGCC | GTCAACGGAA<br>CAGTTGCCTT  | TACGCGCCCA<br>ATGCGCGGGT  | CCGAAACCGA<br>GGCTTTGGCT  |
| 26851 | ATTCTCCTGG<br>TAAGAGGACC  | AACAGGCGGC<br>TTGTCCGCCG | TATTACCACC<br>ATAATGGTGG  | ACACCTCGTA<br>TGTGGAGCAT  | ATAACCTTAA<br>TATTGGAATT  |
| 26901 | TCCCCGTAGT<br>AGGGGCATCA  | TGGCCCGCTG<br>ACCGGGCGAC | CCCTGGTGTA<br>GGGACCACAT  | CCAGGAAAGT<br>GGTCCTTTCA  | CCCGCTCCCA<br>GGGCGAGGGT  |
| 26951 | CCACTGTGGT<br>GGTGACACCA  | ACTTCCCAGA<br>TGAAGGGTCT | GACGCCCAGG<br>CTGCGGGTCC  | CCGAAGTTCA<br>GGCTTCAAGT  | GATGACTAAC<br>CTACTGATTG  |
| 27001 | TCAGGGGCGC<br>AGTCCCCGCG  | AGCTTGCGGG<br>TCGAACGCC  | CGGCTTTTCGT<br>GCCGAAAGCA | CACAGGGTGC<br>GTGTCCCACG  | GGTCGCCCCG<br>CCAGCGGGCC  |
| 27051 | GCAGGGTATA<br>CGTCCCATAT  | ACTCACCTGA<br>TGAGTGGACT | CAATCAGAGG<br>GTTAGTCTCC  | GCGAGGTATT<br>CGCTCCATAA  | CAGCTCAACG<br>GTCGAGTTGC  |
| 27101 | ACGAGTCGGT<br>TGCTCAGCCA  | GAGCTCCTCG<br>CTCGAGGAGC | CTTGGTCTCC<br>GAACCAGAGG  | GTCCGGACGG<br>CAGGCCTGCC  | GACATTTTCAG<br>CTGTAAAGTC |
| 27151 | ATCGGCGGCG<br>TAGCCGCCGC  | CCGGCCGCTC<br>GGCCGGCGAG | TTCATTCACG<br>AAGTAAGTGC  | CCTCGTCAGG<br>GGAGCAGTCC  | CAATCCTAAC<br>GTTAGGATTG  |

FIG. 10A-34

|       |            |             |             |            |            |
|-------|------------|-------------|-------------|------------|------------|
| 27201 | TCTGCAGACC | TCGTCCTCTG  | AGCCGCGCTC  | TGGAGGCATT | GGAAGTCTGC |
|       | AGACGTCTGG | AGCAGGAGAC  | TCGGCGCGAG  | ACCTCCGTAA | CCTTGAGACG |
| 27251 | AATTTATTGA | GGAGTTTGTG  | CCATCGGTCT  | ACTTTAACCC | CTTCTCGGGA |
|       | TTAAATAACT | CCTCAAACAC  | GGTAGCCAGA  | TGAAATTGGG | GAAGAGCCCT |
| 27301 | CCTCCCGGCC | ACTATCCGGA  | TCAATTTATT  | CCTAACTTTG | ACGCGGTAAA |
|       | GGAGGGCCGG | TGATAGGCCT  | AGTTAAATAA  | GGATTGAAAC | TGCGCCATTT |
| 27351 | GGACTCGGCG | GACGGCTACG  | ACTGAATGTT  | AAGTGGAGAG | GCAGAGCAAC |
|       | CCTGAGCCGC | CTGCCGATGC  | TGACTTACAA  | TTCACCTCTC | CGTCTCGTTG |
| 27401 | TGCGCCTGAA | ACACCTGGTC  | CAC TGTGCGC | GCCACAAGTG | CTTTGCCCGC |
|       | ACGCGGACTT | TGTGGACCAG  | GTGACAGCGG  | CGGTGTTTAC | GAAACGGGCG |
| 27451 | GACTCCGGTG | AGTTTTGCTA  | CTTTGAATTG  | CCCGAGGATC | ATATCGAGGG |
|       | CTGAGGCCAC | TCAAAACGAT  | GAAACTTAAC  | GGGCTCCTAG | TATAGCTCCC |
| 27501 | CCCGGCGCAC | GGCGTCCGGC  | TTACCGCCCA  | GGGAGAGCTT | GCCCGTAGCC |
|       | GGGCCGCGTG | CCGCAGGCCG  | AATGGCGGGT  | CCCTCTCGAA | CGGGCATCGG |
| 27551 | TGATTCGGGA | GTTTACCCAG  | CGCCCCCTGC  | TAGTTGAGCG | GGACAGGGGA |
|       | ACTAAGCCCT | CAAATGGGTC  | GCGGGGGACG  | ATCAACTCGC | CCTGTCCCCT |
| 27601 | CCCTGTGTTC | TCACTGTGAT  | TTGCAACTGT  | CCTAACCCTG | GATTACATCA |
|       | GGGACACAAG | AGTGACACTA  | AACGTTGACA  | GGATTGGGAC | CTAATGTAGT |
| 27651 | AGATCTTTGT | TGCCATCTCT  | GTGCTGAGTA  | TAATAAATAC | AGAAATTAAA |
|       | TCTAGAAACA | ACGGTAGAGA  | CACGACTCAT  | ATTATTTATG | TCTTTAATTT |
| 27701 | ATATACTGGG | GCTCCTATCG  | CCATCCTGTA  | AACGCCACCG | TCTTCACCCG |
|       | TATATGACCC | CGAGGATAGC  | GGTAGGACAT  | TTGCGGTGGC | AGAAGTGGGC |
| 27751 | CCCAAGCAAA | CCAAGGCGAA  | CCTTACCTGG  | TACTTTTAAC | ATCTCTCCCT |
|       | GGGTTCGTTT | GGTTCCGCTT  | GGAATGGACC  | ATGAAAATTG | TAGAGAGGGA |
| 27801 | CTGTGATTTA | CAACAGTTTC  | AACCCAGACG  | GAGTGAGTCT | ACGAGAGAAC |
|       | GACACTAAAT | GTTGTCAAAG  | TTGGGTCTGC  | CTCACTCAGA | TGCTCTCTTG |
| 27851 | CTCTCCGAGC | TCAGCTACTC  | CATCAGAAAA  | AACACCACCC | TCCTTACCTG |
|       | GAGAGGCTCG | AGTCGATGAG  | GTAGTCTTTT  | TTGTGGTGGG | AGGAATGGAC |
| 27901 | CCGGGAACGT | ACGAGTGCGT  | CACCGGCCGC  | TGCACCACAC | CTACCGCCTG |
|       | GGCCCTTGCA | TGCTCACGCA  | GTGGCCGGCG  | ACGTGGTGTG | GATGGCGGAC |
| 27951 | ACCGTAAACC | AGACTTTTTTC | CGGACAGACC  | TCAATAACTC | TGTTTACCAG |
|       | TGGCATTTGG | TCTGAAAAAG  | GCCTGTCTGG  | AGTTATTGAG | ACAAATGGTC |

FIG. 10A-35

|       |                           |                          |                          |                          |                          |
|-------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 28001 | AACAGGAGGT<br>TTGTCCTCCA  | GAGCTTAGAA<br>CTCGAATCTT | AACCCTTAGG<br>TTGGGAATCC | GTATTAGGCC<br>CATAATCCGG | AAAGGCGCAG<br>TTCCGCGTC  |
| 28051 | CTACTGTGGG<br>GATGACACCC  | GTTTATGAAC<br>CAAATACTTG | AATTCAAGCA<br>TTAAGTTCGT | ACTCTACGGG<br>TGAGATGCCC | CTATTCTAAT<br>GATAAGATTA |
| 28101 | TCAGGTTTCT<br>AGTCCAAAGA  | CTAGAATCGG<br>GATCTTAGCC | GGTTGGGGTT<br>CCAACCCCAA | ATTCTCTGTC<br>TAAGAGACAG | TTGTGATTCT<br>AACACTAAGA |
| 28151 | CTTTATTCTT<br>GAAATAAGAA  | ATACTAACGC<br>TATGATTGCG | TTCTCTGCCT<br>AAGAGACGGA | AAGGCTCGCC<br>TTCCGAGCGG | GCCTGCTGTG<br>CGGACGACAC |
| 28201 | TGCACATTTG<br>ACGTGTAAAC  | CATTTATTGT<br>GTAAATAACA | CAGCTTTTTA<br>GTCGAAAAAT | AACGCTGGGG<br>TTGCGACCCC | TCGCCACCCA<br>AGCGGTGGGT |
| 28251 | AGATGATTAG<br>TCTACTAATC  | GTACATAATC<br>CATGTATTAG | CTAGGTTTAC<br>GATCCAAATG | TCACCCTTGC<br>AGTGGGAACG | GTCAGCCCAC<br>CAGTCGGGTG |
| 28301 | GGTACCACCC<br>CCATGGTGGG  | AAAAGGTGGA<br>TTTTCCACCT | TTTTAAGGAG<br>AAAATTCCTC | CCAGCCTGTA<br>GGTCGGACAT | ATGTTACATT<br>TACAATGTAA |
| 28351 | CGCAGCTGAA<br>GCGTCGACTT  | GCTAATGAGT<br>CGATTACTCA | GCACCACTCT<br>CGTGGTGAGA | TATAAAATGC<br>ATATTTTACG | ACCACAGAAC<br>TGGTGTCTTG |
| 28401 | ATGAAAAGCT<br>TACTTTTTCGA | GCTTATTCGC<br>CGAATAAGCG | CACAAAAACA<br>GTGTTTTTGT | AAATTGGCAA<br>TTTAACCGTT | GTATGCTGTT<br>CATACGACAA |
| 28451 | TATGCTATTT<br>ATACGATAAA  | GGCAGCCAGG<br>CCGTCGGTCC | TGACACTACA<br>ACTGTGATGT | GAGTATAATG<br>CTCATATTAC | TTACAGTTTT<br>AATGTCAAAA |
| 28501 | CCAGGGTAAA<br>GGTCCCATTT  | AGTCATAAAA<br>TCAGTATTTT | CTTTTATGTA<br>GAAAATACAT | TACTTTTCCA<br>ATGAAAAGGT | TTTTATGAAA<br>AAAATACTTT |
| 28551 | TGTGCGACAT<br>ACACGCTGTA  | TACCATGTAC<br>ATGGTACATG | ATGAGCAAAC<br>TACTCGTTTG | AGTATAAGTT<br>TCATATTCAA | GTGGCCCCCA<br>CACCGGGGGT |
| 28601 | CAAAATTGTG<br>GTTTTAACAC  | TGGAAACAC<br>ACCTTTTGTG  | TGGCACTTTC<br>ACCGTGAAAG | TGCTGCACTG<br>ACGACGTGAC | CTATGCTAAT<br>GATACGATTA |
| 28651 | TACAGTGCTC<br>ATGTCACGAG  | GCTTTGGTCT<br>CGAAACCAGA | GTACCCTACT<br>CATGGGATGA | CTATATTAAA<br>GATATAATTT | TACAAAAGCA<br>ATGTTTTTCG |
| 28701 | GACGCAGCTT<br>CTGCGTCGAA  | TATTGAGGAA<br>ATAACTCCTT | AAGAAAATGC<br>TTCTTTTACG | CTTAATTTAC<br>GAATTAAATG | TAAGTTACAA<br>ATTCAATGTT |
| 28751 | AGCTAATGTC<br>TCGATTACAG  | ACCACTAACT<br>TGGTGATTGA | GCTTTACTCG<br>CGAAATGAGC | CTGCTTGCAA<br>GACGAACGTT | AACAAATTCA<br>TTGTTTAAGT |

FIG. 10A-36

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 28801 | AAAAGTTAGC<br>TTTTCAATCG | ATTATAATTA<br>TAATATTAAT | GAATAGGATT<br>CTTATCCTAA | TAAACCCCCC<br>ATTTGGGGGG | GGTCATTTCC<br>CCAGTAAAGG |
| 28851 | TGCTCAATAC<br>ACGAGTTATG | CATTCCCCTG<br>GTAAGGGGAC | AACAATTGAC<br>TTGTTAACTG | TCTATGTGGG<br>AGATACACCC | ATATGCTCCA<br>TATACGAGGT |
| 28901 | GCGCTACAAC<br>CGCGATGTTG | CTTGAAGTCA<br>GAACTTCAGT | GGCTTCCTGG<br>CCGAAGGACC | ATGTCAGCAT<br>TACAGTCGTA | CTGACTTTGG<br>GACTGAAACC |
| 28951 | CCAGCACCTG<br>GGTCGTGGAC | TCCCGCGGAT<br>AGGGCGCCTA | TTGTTCCAGT<br>AACAAGGTCA | CCAACTACAG<br>GGTTGATGTC | CGACCCACCC<br>GCTGGGTGGG |
| 29001 | TAACAGAGAT<br>ATTGTCTCTA | GACCAACACA<br>CTGGTTGTGT | ACCAACGCGG<br>TGGTTGCGCC | CCGCCGCTAC<br>GGCGGCGATG | CGGACTTACA<br>GCCTGAATGT |
| 29051 | TCTACCACAA<br>AGATGGTGTT | ATACACCCCA<br>TATGTGGGGT | AGTTTCTGCC<br>TCAAAGACGG | TTTGTCAATA<br>AAACAGTTAT | ACTGGGATAA<br>TGACCCTATT |
| 29101 | CTTGGGCATG<br>GAACCCGTAC | TGGTGGTTCT<br>ACCACCAAGA | CCATAGCGCT<br>GGTATCGCGA | TATGTTTGTA<br>ATACAAACAT | TGCCTTATTA<br>ACGGAATAAT |
| 29151 | TTATGTGGCT<br>AATACACCGA | CATCTGCTGC<br>GTAGACGACG | CTAAAGCGCA<br>GATTTGCGGT | AACGCGCCCG<br>TTGCGCGGGC | ACCACCCATC<br>TGGTGGGTAG |
| 29201 | TATAGTCCCA<br>ATATCAGGGT | TCATTGTGCT<br>AGTAACACGA | ACACCCAAAC<br>TGTGGGTTTG | AATGATGGAA<br>TTACTACCTT | TCCATAGATT<br>AGGTATCTAA |
| 29251 | GGACGGACTG<br>CCTGCCTGAC | AAACACATGT<br>TTTGTGTACA | TCTTTTCTCT<br>AGAAAAGAGA | TACAGTATGA<br>ATGTCATACT | TTAAATGAGA<br>AATTTACTCT |
| 29301 | CATGATTCCT<br>GTACTAAGGA | CGAGTTTTTA<br>GCTCAAAAT  | TATTACTGAC<br>ATAATGACTG | CCTTGTTGCG<br>GGAACAACGC | CTTTTTTGTG<br>GAAAAAACAC |
| 29351 | CGTGCTCCAC<br>GCACGAGGTG | ATTGGCTGCG<br>TAACCGACGC | GTTTCTCACA<br>CAAAGAGTGT | TCGAAGTAGA<br>AGCTTCATCT | CTGCATTCCA<br>GACGTAAGGT |
| 29401 | GCCTTCACAG<br>CGGAAGTGTC | TCTATTTGCT<br>AGATAAACGA | TTACGGATTT<br>AATGCCATAA | GTCACCCTCA<br>CAGTGGGAGT | CGCTCATCTG<br>GCGAGTAGAC |
| 29451 | CAGCCTCATC<br>GTCGGAGTAG | ACTGTGGTCA<br>TGACACCAGT | TCGCCTTTAT<br>AGCGGAAATA | CCAGTGCATT<br>GGTCACGTAA | GACTGGGTCT<br>CTGACCCAGA |
| 29501 | GTGTGCGCTT<br>CACACGCGAA | TGCATATCTC<br>ACGTATAGAG | AGACACCATC<br>TCTGTGGTAG | CCCAGTACAG<br>GGGTCATGTC | GGACAGGACT<br>CCTGTCCTGA |
| 29551 | ATAGCTGAGC<br>TATCGACTCG | TTCTTAGAAT<br>AAGAATCTTA | TCTTTAATTA<br>AGAAATTAAT | TGAAATTTAC<br>ACTTTAAATG | TGTGACTTTT<br>ACACTGAAAA |

FIG. 10A-37

|       |             |            |            |            |            |
|-------|-------------|------------|------------|------------|------------|
| 29601 | CTGCTGATTA  | TTTGCACCCT | ATCTGCGTTT | TGTTCCCCGA | CCTCCAAGCC |
|       | GACGACTAAT  | AAACGTGGGA | TAGACGCAAA | ACAAGGGGCT | GGAGGTTTCG |
| 29651 | TCAAAGACAT  | ATATCATGCA | GATTCACTCG | TATATGGAAT | ATTCCAAGTT |
|       | AGTTTCTGTA  | TATAGTACGT | CTAAGTGAGC | ATATACCTTA | TAAGGTTCAA |
| 29701 | GCTACAATGA  | AAAAAGCGAT | CTTTCCGAAG | CCTGGTTATA | TGCAATCATC |
|       | CGATGTTACT  | TTTTTCGCTA | GAAAGGCTTC | GGACCAATAT | ACGTTAGTAG |
| 29751 | TCTGTTATGG  | TGTTCTGCAG | TACCATCTTA | GCCCTAGCTA | TATATCCCTA |
|       | AGACAATACC  | ACAAGACGTC | ATGGTAGAAT | CGGGATCGAT | ATATAGGGAT |
| 29801 | CCTTGACATT  | GGCTGGAACG | CAATAGATGC | CATGAACCAC | CCAACTTTCC |
|       | GGAAGTGTAA  | CCGACCTTGC | GTTATCTACG | GTACTTGGTG | GGTTGAAAGG |
| 29851 | CCGCGCCCGC  | TATGCTTCCA | CTGCAACAAG | TTGTTGCCGG | CGGCTTTGTC |
|       | GGCGCGGGCG  | ATACGAAGGT | GACGTTGTTC | AACAACGGCC | GCCGAAACAG |
| 29901 | CCAGCCAATC  | AGCCTCGCCC | ACCTTCTCCC | ACCCCCACTG | AAATCAGCTA |
|       | GGTCGGTTAG  | TCGGAGCGGG | TGGAAGAGGG | TGGGGGTGAC | TTTAGTCGAT |
| 29951 | CTTTAATCTA  | ACAGGAGGAG | ATGACTGACA | CCCTAGATCT | AGAAATGGAC |
|       | GAAATTAGAT  | TGTCCTCCTC | TACTGACTGT | GGGATCTAGA | TCTTTACCTG |
| 30001 | GGAATTATTA  | CAGAGCAGCG | CCTGCTAGAA | AGACGCAGGG | CAGCGGCCGA |
|       | CCTTAATAAT  | GTCTCGTCGC | GGACGATCTT | TCTGCGTCCC | GTCGCCGGCT |
| 30051 | GCAACAGCGC  | ATGAATCAAG | AGCTCCAAGA | CATGGTTAAC | TTGCACCAGT |
|       | CGTTGTCGCG  | TACTTAGTTC | TCGAGGTTCT | GTACCAATTG | AACGTGGTCA |
| 30101 | GCAAAAGGGG  | TATCTTTTGT | CTCGTAAAGC | AGGCCAAAGT | CACCTACGAC |
|       | CGTTTTCCCC  | ATAGAAAACA | GAGCATTTTC | TCCGGTTTCA | GTGGATGCTG |
| 30151 | AGTAATACCA  | CCGGACACCG | CCTTAGCTAC | AAGTTGCCAA | CCAAGCGTCA |
|       | TCATTATGGT  | GGCCTGTGGC | GGAATCGATG | TTCAACGGTT | GGTTCGCAGT |
| 30201 | GAAATTGGTG  | GTCATGGTGG | GAGAAAAGCC | CATTACCATA | ACTCAGCACT |
|       | CTTTAACCAC  | CAGTACCACC | CTCTTTTCGG | GTAATGGTAT | TGAGTCGTGA |
| 30251 | CGGTAGAAAC  | CGAAGGCTGC | ATTCACTCAC | CTTGTCAAGG | ACCTGAGGAT |
|       | GCCATCTTTG  | GCTTCCGACG | TAAGTGAGTG | GAACAGTTCC | TGGACTCCTA |
| 30301 | CTCTGCACCC  | TTATTAAGAC | CCTGTGCGGT | CTCAAAGATC | TTATTCCCTT |
|       | GAGACGTGGG  | AATAATTCTG | GGACACGCCA | GAGTTTCTAG | AATAAGGGAA |
| 30351 | TAAC TAATAA | AAAAAAATAA | TAAAGCATCA | CTTACTTAAA | ATCAGTTAGC |
|       | ATTGATTATT  | TTTTTTTATT | ATTCGTTAGT | GAATGAATTT | TAGTCAATCG |

FIG. 10A-38

|       |                          |                           |                           |                          |                           |
|-------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 30401 | AAATTTCTGT<br>TTTAAAGACA | CCAGTTTATT<br>GGTCAAATAA  | CAGCAGCACC<br>GTCGTCGTGG  | TCCTTGCCCT<br>AGGAACGGGA | CCTCCCAGCT<br>GGAGGGTCTGA |
| 30451 | CTGGTATTGC<br>GACCATAACG | AGCTTCCTCC<br>TCGAAGGAGG  | TGGCTGCAAA<br>ACCGACGTTT  | CTTTCTCCAC<br>GAAAGAGGTG | AATCTAAATG<br>TTAGATTTAC  |
| 30501 | GAATGTCAGT<br>CTTACAGTCA | TTCTCCTGT<br>AAGGAGGACA   | TCCTGTCCAT<br>AGGACAGGTA  | CCGCACCCAC<br>GGCGTGGGTG | TATCTTCATG<br>ATAGAAGTAC  |
| 30551 | TTGTTGCAGA<br>AACAACGTCT | TGAAGCGCGC<br>ACTTCGCGCG  | AAGACCGTCT<br>TTCTGGCAGA  | GAAGATACCT<br>CTTCTATGGA | TCAACCCCGT<br>AGTTGGGGCA  |
| 30601 | GTATCCATAT<br>CATAGGTATA | GACACGGAAA<br>CTGTGCCTTT  | CCGGTCCTCC<br>GGCCAGGAGG  | AACTGTGCCT<br>TTGACACGGA | TTTCTTACTC<br>AAAGAATGAG  |
| 30651 | CTCCCTTTGT<br>GAGGGAAACA | ATCCCCCAAT<br>TAGGGGGTTA  | GGGTTTCAAG<br>CCCAAAGTTC  | AGAGTCCCCC<br>TCTCAGGGGG | TGGGGTACTC<br>ACCCCATGAG  |
| 30701 | TCTTTGCGCC<br>AGAAACGCGG | TATCCGAACC<br>ATAGGCTTGG  | TCTAGTTACC<br>AGATCAATGG  | TCCAATGGCA<br>AGGTTACCGT | TGCTTGCGCT<br>ACGAACGCGA  |
| 30751 | CAAAATGGGC<br>GTTTTACCCG | AACGGCCTCT<br>TTGCCGGAGA  | CTCTGGACGA<br>GAGACCTGCT  | GGCCGGCAAC<br>CCGGCCGTTG | CTTACCTCCC<br>GAATGGAGGG  |
| 30801 | AAAATGTAAC<br>TTTTACATTG | CACTGTGAGC<br>GTGACACTCG  | CCACCTCTCA<br>GGTGGAGAGT  | AAAAAACCAA<br>TTTTTTGGTT | GTCAAACATA<br>CAGTTTGTAT  |
| 30851 | AACCTGGA<br>TTGGACCTTT   | TATCTGCACC<br>ATAGACGTGG  | CCTCACAGTT<br>GGAGTGTC    | ACCTCAGAAG<br>TGGAGTCTTC | CCCTAACTGT<br>GGGATTGACA  |
| 30901 | GGCTGCCGCC<br>CCGACGGCGG | GCACCTCTAA<br>CGTGGAGATT  | TGGTCGCGGG<br>ACCAGCGCCC  | CAACACACTC<br>GTTGTGTGAG | ACCATGCAAT<br>TGGTACGTTA  |
| 30951 | CACAGGCCCC<br>GTGTCCGGGG | GCTAACCGTG<br>CGATTGGCAC  | CACGACTCCA<br>GTGCTGAGGT  | AACTTAGCAT<br>TTGAATCGTA | TGCCACCCAA<br>ACGGTGGGTT  |
| 31001 | GGACCCCTCA<br>CCTGGGGAGT | CAGTGTGAGA<br>GTCACAGTCT  | AGGAAAGCTA<br>TCCTTTCGAT  | GCCCTGCAAA<br>CGGGACGTTT | CATCAGGCCC<br>GTAGTCCGGG  |
| 31051 | CCTCACCACC<br>GGAGTGGTGG | ACCGATAGCA<br>TGGCTATCGT  | GTACCCTTAC<br>CATGGGAATG  | TATCACTGCC<br>ATAGTGACGG | TCACCCCTT<br>AGTGGGGGAA   |
| 31101 | TAACTACTGC<br>ATTGATGACG | CACTGGTAGC<br>GTGACCATCG  | TTGGGCATTG<br>AACCCGTAAC  | ACTTGAAAGA<br>TGAACTTTCT | GCCCATTTAT<br>CGGGTAAATA  |
| 31151 | ACACAAAATG<br>TGTGTTTTAC | GAAAAC TAGG<br>CTTTTGATCC | ACTAAAGTAC<br>TGATTTTCATG | GGGGCTCCTT<br>CCCCGAGGAA | TGCATGTAAC<br>ACGTACATTG  |

FIG. 10A-39



|       |                          |                          |                          |                           |                            |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|
| 31201 | AGACGACCTA<br>TCTGCTGGAT | AACACTTTGA<br>TTGTGAAACT | CCGTAGCAAC<br>GGCATCGTTG | TGGTCCAGGT<br>ACCAGGTCCA  | GTGACTATTA<br>CACTGATAAT   |
| 31251 | ATAATACTTC<br>TATTATGAAG | CTTGCAAAC<br>GAACGTTTGA  | AAAGTTACTG<br>TTTCAATGAC | GAGCCTTGGG<br>CTCGGAACCC  | TTTTGATTCA<br>AAAACATAAGT  |
| 31301 | CAAGGCAATA<br>GTTCCGTTAT | TGCAACTTAA<br>ACGTTGAATT | TGTAGCAGGA<br>ACATCGTCCT | GGACTAAGGA<br>CCTGATTCCCT | TTGATTCTCA<br>AACTAAGAGT   |
| 31351 | AAACAGACGC<br>TTTGTCTGCG | CTTATACTTG<br>GAATATGAAC | ATGTTAGTTA<br>TACAATCAAT | TCCGTTTGAT<br>AGGCAAACATA | GCTCAAAACC<br>CGAGTTTTTG   |
| 31401 | AACTAAATCT<br>TTGATTTAGA | AAGACTAGGA<br>TTCTGATCCT | CAGGGCCCTC<br>GTCCCGGGAG | TTTTTATAAA<br>AAAAATATTT  | CTCAGCCCAC<br>GAGTCGGGTG   |
| 31451 | AACTTGGATA<br>TTGAACCTAT | TTAACTACAA<br>AATTGATGTT | CAAAGGCCTT<br>GTTTCCGGAA | TACTTGTTTA<br>ATGAACAAAT  | CAGCTTCAAA<br>GTCGAAGTTT   |
| 31501 | CAATTCCAAA<br>GTTAAGGTTT | AAGCTTGAGG<br>TTCGAACCTC | TTAACCTAAG<br>AATTGGATTC | CACTGCCAAG<br>GTGACGGTTC  | GGGTTGATGT<br>CCCAACTACA   |
| 31551 | TTGACGCTAC<br>AACTGCGATG | AGCCATAGCC<br>TCGGTATCGG | ATTAATGCAG<br>TAATTACGTC | GAGATGGGCT<br>CTCTACCCGA  | TGAATTTGGT<br>ACTTAAACCA   |
| 31601 | TCACCTAATG<br>AGTGGATTAC | CACCAAACAC<br>GTGGTTTGTG | AAATCCCCTC<br>TTTAGGGGAG | AAAACAAAAA<br>TTTTGTTTTT  | TTGGCCATGG<br>AACCGGTACC   |
| 31651 | CCTAGAATTT<br>GGATCTTAAA | GATTCAAACA<br>CTAAGTTTGT | AGGCTATGGT<br>TCCGATACCA | TCCTAAACTA<br>AGGATTTGAT  | GGAAC TG GCC<br>CCTTGACCGG |
| 31701 | TTAGTTTTGA<br>AATCAAACT  | CAGCACAGGT<br>GTCGTGTCCA | GCCATTACAG<br>CGGTAATGTC | TAGGAAACAA<br>ATCCTTTGTT  | AAATAATGAT<br>TTTATTACTA   |
| 31751 | AAGCTAACTT<br>TTCGATTGAA | TGTGGACCAC<br>ACACCTGGTG | ACCAGCTCCA<br>TGGTCGAGGT | TCTCCTAACT<br>AGAGGATTGA  | GTAGACTAAA<br>CATCTGATTT   |
| 31801 | TGCAGAGAAA<br>ACGTCTCTTT | GATGCTAAAC<br>CTACGATTTG | TCACTTTGGT<br>AGTGAAACCA | CTTAACAAAA<br>GAATTGTTTT  | TGTGGCAGTC<br>ACACCGTCAG   |
| 31851 | AAATACTTGC<br>TTTATGAACG | TACAGTTTCA<br>ATGTCAAAGT | GTTTTGGCTG<br>CAAACCGAC  | TTAAAGGCAG<br>AATTTCCGTC  | TTTGGCTCCA<br>AAACCGAGGT   |
| 31901 | ATATCTGGAA<br>TATAGACCTT | CAGTTCAAAG<br>GTCAAGTTTC | TGCTCATCTT<br>ACGAGTAGAA | ATTATAAGAT<br>TAATATTCTA  | TTGACGAAAA<br>AACTGCTTTT   |
| 31951 | TGGAGTGCTA<br>ACCTCACGAT | CTAAACAATT<br>GATTGTGTTA | CCTTCCTGGA<br>GGAAGGACCT | CCCAGAATAT<br>GGGTCTTATA  | TGGAAC TTTA<br>ACCTTGAAAT  |

FIG. 10A-40

|       |                          |                          |                          |                           |                           |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 32001 | GAAATGGAGA<br>CTTTACCTCT | TCTTACTGAA<br>AGAATGACTT | GGCACAGCCT<br>CCGTGTCGGA | ATACAAACGC<br>TATGTTTGCG  | TGTTGGATTT<br>ACAACCTAAA  |
| 32051 | ATGCCTAACC<br>TACGGATTGG | TATCAGCTTA<br>ATAGTCGAAT | TCCAAAATCT<br>AGGTTTTAGA | CACGGTAAAA<br>GTGCCATTTT  | CTGCCAAAAG<br>GACGGTTTTT  |
| 32101 | TAACATTGTC<br>ATTGTAACAG | AGTCAAGTTT<br>TCAGTTCAAA | ACTTAAACGG<br>TGAATTGACC | AGACAAAACCT<br>TCTGTTTTGA | AAACCTGTAA<br>TTTGGACATT  |
| 32151 | CACTAACCAT<br>GTGATTGGTA | TACACTAAAC<br>ATGTGATTTG | GGTACACAGG<br>CCATGTGTCC | AAACAGGAGA<br>TTTGTCTCT   | CACAACTCCA<br>GTGTTGAGGT  |
| 32201 | AGTGCATACT<br>TCACGTATGA | CTATGTCATT<br>GATACAGTAA | TTCATGGGAC<br>AAGTACCCTG | TGGTCTGGCC<br>ACCAGACCGG  | ACAACCTACAT<br>TGTTGATGTA |
| 32251 | TAATGAAATA<br>ATTACTTTAT | TTTGCCACAT<br>AAACGGTGTA | CCTCTTACAC<br>GGAGAATGTG | TTTTTCATAC<br>AAAAAGTATG  | ATTGCCCAAG<br>TAACGGGTTT  |
| 32301 | AATAAAGAAT<br>TTATTTCTTA | CGTTTGTGTT<br>GCAAACACAA | ATGTTTCAAC<br>TACAAAGTTG | GTGTTTATTT<br>CACAAATAAA  | TTCAATTGCA<br>AAGTTAACGT  |
| 32351 | GAAAATTTCA<br>CTTTTAAAGT | AGTCATTTTT<br>TCAGTAAAAA | CATTCAGTAG<br>GTAAGTCATC | TATAGCCCCA<br>ATATCGGGGT  | CCACCACATA<br>GGTGGTGTAT  |
| 32401 | GCTTATACAG<br>CGAATATGTC | ATCACCGTAC<br>TAGTGGCATG | CTTAATCAAA<br>GAATTAGTTT | CTCACAGAAC<br>GAGTGTCTTG  | CCTAGTATTC<br>GGATCATAAG  |
| 32451 | AACCTGCCAC<br>TTGGACGGTG | CTCCCTCCCA<br>GAGGGAGGGT | ACACACAGAG<br>TGTGTGTCTC | TACACAGTCC<br>ATGTGTCAGG  | TTTCTCCCCG<br>AAAGAGGGGC  |
| 32501 | GCTGGCCTTA<br>CGACCGGAAT | AAAAGCATCA<br>TTTTCGTAGT | TATCATGGGT<br>ATAGTACCCA | AACAGACATA<br>TTGTCTGTAT  | TTCTTAGGTG<br>AAGAATCCAC  |
| 32551 | TTATATTCCA<br>AATATAAGGT | CACGGTTTCC<br>GTGCCAAAGG | TGTCGAGCCA<br>ACAGCTCGGT | AACGCTCATC<br>TTGCGAGTAG  | AGTGATATTA<br>TCACTATAAT  |
| 32601 | ATAAACTCCC<br>TATTTGAGGG | CGGGCAGCTC<br>GCCCCTCGAG | ACTTAAGTTC<br>TGAATTCAAG | ATGTCGCTGT<br>TACAGCGACA  | CCAGCTGCTG<br>GGTCGACGAC  |
| 32651 | AGCCACAGGC<br>TCGGTGTCCG | TGCTGTCCAA<br>ACGACAGGTT | CTTGCGGTTG<br>GAACGCCAAC | CTTAACGGGC<br>GAATTGCCCG  | GGCGAAGGAG<br>CCGCTTCCTC  |
| 32701 | AAGTCCACGC<br>TTCAGGTGCG | CTACATGGGG<br>GATGTACCCC | GTAGAGTCAT<br>CATCTCAGTA | AATCGTG CAT<br>TTAGCACGTA | CAGGATAGGG<br>GTCCTATCCC  |
| 32751 | CGGTGGTGCT<br>GCCACCACGA | GCAGCAGCGC<br>CGTCGTCGCG | GCGAATAAAC<br>CGCTTATTTG | TGCTGCCGCC<br>ACGACGGCGG  | GCCGCTCCGT<br>CGGCGAGGCA  |

FIG. 10A-41

|       |                           |                           |                           |                          |                           |
|-------|---------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 32801 | CCTGCAGGAA<br>GGACGTCCTT  | TACAACATGG<br>ATGTTGTACC  | CAGTGGTCTC<br>GTCACCAGAG  | CTCAGCGATG<br>GAGTCGCTAC | ATTCGCACCG<br>TAAGCGTGGC  |
| 32851 | CCCGCAGCAT<br>GGGCGTCGTA  | AAGGCGCCTT<br>TTCCGCGGAA  | GTCCTCCGGG<br>CAGGAGGCC   | CACAGCAGCG<br>GTGTCGTCGC | CACCTGATC<br>GTGGGACTAG   |
| 32901 | TCACTTAAAT<br>AGTGAATTTA  | CAGCACAGTA<br>GTCGTGTCAT  | ACTGCAGCAC<br>TGACGTCGTG  | AGCACCACAA<br>TCGTGGTGTT | TATTGTTCAA<br>ATAACAAGTT  |
| 32951 | AATCCCACAG<br>TTAGGGTGTC  | TGCAAGGCGC<br>ACGTTCCGCG  | TGTATCCAAA<br>ACATAGGTTT  | GCTCATGGCG<br>CGAGTACCGC | GGGACCACAG<br>CCCTGGTGTC  |
| 33001 | AACCCACGTG<br>TTGGGTGCAC  | GCCATCATAC<br>CGGTAGTATG  | CACAAGCGCA<br>GTGTTGCGGT  | GGTAGATTAA<br>CCATCTAATT | GTGGCGACCC<br>CACCGCTGGG  |
| 33051 | CTCATAAACA<br>GAGTATTTGT  | CGCTGGACAT<br>GCGACCTGTA  | AAACATTACC<br>TTTGTAATGG  | TCTTTTGGCA<br>AGAAAACCGT | TGTTGTAATT<br>ACAACATTAA  |
| 33101 | CACCACCTCC<br>GTGGTGGAGG  | CGGTACCATA<br>GCCATGGTAT  | TAAACCTCTG<br>ATTTGGAGAC  | ATTAAACATG<br>TAATTTGTAC | GCGCCATCCA<br>CGCGGTAGGT  |
| 33151 | CCACCATCCT<br>GGTGGTAGGA  | AAACCAGCTG<br>TTTGGTCGAC  | GCCAAAACCT<br>CGGTTTTGGA  | GCCCGCCGGC<br>CGGGCGGCCG | TATACACTGC<br>ATATGTGACG  |
| 33201 | AGGGAACCGG<br>TCCCTTGGCC  | GACTGGAACA<br>CTGACCTTGT  | ATGACAGTGG<br>TACTGTCACC  | AGAGCCCAGG<br>TCTCGGGTCC | ACTCGTAACC<br>TGAGCATTGG  |
| 33251 | ATGGATCATC<br>TACCTAGTAG  | ATGCTCGTCA<br>TACGAGCAGT  | TGATATCAAT<br>ACTATAGTTA  | GTTGGCACAA<br>CAACCGTGTT | CACAGGCACA<br>GTGTCCGTGT  |
| 33301 | CGTGCATACA<br>GCACGTATGT  | CTTCCTCAGG<br>GAAGGAGTCC  | ATTACAAGCT<br>TAATGTTCTGA | CCTCCCGCGT<br>GGAGGGCGCA | TAGAACCATA<br>ATCTTGGTAT  |
| 33351 | TCCCAGGGAA<br>AGGGTCCCTT  | CAACCCATTC<br>GTTGGGTAAG  | CTGAATCAGC<br>GACTTAGTCG  | GTAAATCCCA<br>CATTTAGGGT | CACTGCAGGG<br>GTGACGTCCC  |
| 33401 | AAGACCTCGC<br>TTCTGGAGCG  | ACGTA ACTCA<br>TGCATTGAGT | CGTTGTGCAT<br>GCAACACGTA  | TGTCAAAGTG<br>ACAGTTTCAC | TTACATTTCGG<br>AATGTAAGCC |
| 33451 | GCAGCAGCGG<br>CGTCGTGCGC  | ATGATCCTCC<br>TACTAGGAGG  | AGTATGGTAG<br>TCATACCATC  | CGCGGGTTTC<br>GCGCCCAAAG | TGTCTCAAAA<br>ACAGAGTTTT  |
| 33501 | GGAGGTAGAC<br>CCTCCATCTG  | GATCCCTACT<br>CTAGGGATGA  | GTACGGAGTG<br>CATGCCTCAC  | CGCCGAGACA<br>GCGGCTCTGT | ACCGAGATCG<br>TGGCTCTAGC  |
| 33551 | TGTTGGTTCGT<br>ACAACCAGCA | AGTGTCATGC<br>TCACAGTACG  | CAAATGGAAC<br>GTTTACCTTG  | GCCGGACGTA<br>CGGCCTGCAT | GTCATATTTT<br>CAGTATAAAG  |

FIG. 10A-42

|       |                           |                           |                           |                          |                           |
|-------|---------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 33601 | CTGAAGCAAA<br>GACTTCGTTT  | ACCAGGTGCG<br>TGGTCCACGC  | GGCGTGACAA<br>CCGCACTGTT  | ACAGATCTGC<br>TGTCTAGACG | GTCTCCGGTC<br>CAGAGGCCAG  |
| 33651 | TCGCCGCTTA<br>AGCGGCGAAT  | GATCGCTCTG<br>CTAGCGAGAC  | TGTAGTAGTT<br>ACATCATCAA  | GTAGTATATC<br>CATCATATAG | CACTCTCTCA<br>GTGAGAGAGT  |
| 33701 | AAGCATCCAG<br>TTCGTAGGTC  | GCGCCCCCTG<br>CGCGGGGGAC  | GCTTCGGGTT<br>CGAAGCCCAA  | CTATGTAAAC<br>GATACATTTG | TCCTTCATGC<br>AGGAAGTACG  |
| 33751 | GCCGCTGCCC<br>CGGCGACGGG  | TGATAACATC<br>ACTATTGTAG  | CACCACCGCA<br>GTGGTGGCGT  | GAATAAGCCA<br>CTTATTCGGT | CACCCAGCCA<br>GTGGGTCTGGT |
| 33801 | ACCTACACAT<br>TGGATGTGTA  | TCGTTCTGCG<br>AGCAAGACGC  | AGTCACACAC<br>TCAGTGTGTG  | GGGAGGAGCG<br>CCCTCCTCGC | GGAAGAGCTG<br>CCTTCTCGAC  |
| 33851 | GAAGAACCAT<br>CTTCTTGGTA  | GTTTTTTTTT<br>CAAAAAAAAA  | TTATTCCAAA<br>AATAAGGTTT  | AGATTATCCA<br>TCTAATAGGT | AAACCTCAAA<br>TTTGGAGTTT  |
| 33901 | ATGAAGATCT<br>TACTTCTAGA  | ATTAAGTGAA<br>TAATTCACCT  | CGCGCTCCCC<br>GCGCGAGGGG  | TCCGGTGGCG<br>AGGCCACCGC | TGGTCAAACCT<br>ACCAGTTTGA |
| 33951 | CTACAGCCAA<br>GATGTCGGTT  | AGAACAGATA<br>TCTTGTCTAT  | ATGGCATTTC<br>TACCGTAAAC  | TAAGATGTTG<br>ATTCTACAAC | CACAATGGCT<br>GTGTTACCGA  |
| 34001 | TCCAAAAGGC<br>AGGTTTTCCG  | AAACGGCCCT<br>TTTGCCGGGA  | CACGTCCAAG<br>GTGCAGGTTT  | TGGACGTAAA<br>ACCTGCATTT | GGCTAAACCC<br>CCGATTTGGG  |
| 34051 | TTCAGGGTGA<br>AAGTCCCCT   | ATCTCCTCTA<br>TAGAGGAGAT  | TAAACATTCC<br>ATTTGTAAGG  | AGCACCTTCA<br>TCGTGGAAGT | ACCATGCCCA<br>TGGTACGGGT  |
| 34101 | AATAATTCTC<br>TTATTAAGAG  | ATCTCGCCAC<br>TAGAGCGGTG  | CTTCTCAATA<br>GAAGAGTTAT  | TATCTCTAAG<br>ATAGAGATTC | CAAATCCCGA<br>GTTTAGGGCT  |
| 34151 | ATATTAAGTC<br>TATAATTTCAG | CGGCCATTGT<br>GCCGGTAACA  | AAAAATCTGC<br>TTTTTAGACG  | TCCAGAGCGC<br>AGGTCTCGCG | CCTCCACCTT<br>GGAGGTGGAA  |
| 34201 | CAGCCTCAAG<br>GTCGGAGTTC  | CAGCGAATCA<br>GTCGCTTAGT  | TGATTGCAAA<br>ACTAACGTTT  | AATTCAGGTT<br>TTAAGTCCAA | CCTCACAGAC<br>GGAGTGTCTG  |
| 34251 | CTGTATAAGA<br>GACATATTCT  | TTCAAAAGCG<br>AAGTTTTTCGC | GAACATTAAC<br>CTTGTAATTG  | AAAAATACCG<br>TTTTTATGGC | CGATCCCGTA<br>GCTAGGGCAT  |
| 34301 | GGTCCCTTCG<br>CCAGGGAAGC  | CAGGGCCAGC<br>GTCCCGGTCTG | TGAACATAAT<br>ACTTGTAATTA | CGTGCAGGTC<br>GCACGTCCAG | TGCACGGACC<br>ACGTGCCTGG  |
| 34351 | AGCGCGGCCA<br>TCGCGCCGGT  | CTTCCCCGCC<br>GAAGGGGCGG  | AGGAACCATG<br>TCCTTGGTAC  | ACAAAAGAAC<br>TGTTTTCTTG | CCCACTGAT<br>GGTGTGACTA   |

FIG. 10A-43

|       |                           |                           |                          |                           |                           |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 34401 | TATGACACGC<br>ATACTGTGCG  | ATACTCGGAG<br>TATGAGCCTC  | CTATGCTAAC<br>GATACGATTG | CAGCGTAGCC<br>GTCGCATCGG  | CCGATGTAAG<br>GGCTACATTC  |
| 34451 | CTTGTTGCAT<br>GAACAACGTA  | GGGCGGCGAT<br>CCCGCCGCTA  | ATAAAATGCA<br>TATTTTACGT | AGGTGCTGCT<br>TCCACGACGA  | CAAAAAATCA<br>GTTTTTTAGT  |
| 34501 | GGCAAAGCCT<br>CCGTTTCGGA  | CGCGCAAAAA<br>GCGCGTTTTT  | AGAAAGCACA<br>TCTTTCGTGT | TCGTAGTCAT<br>AGCATCAGTA  | GCTCATGCAG<br>CGAGTACGTC  |
| 34551 | ATAAAGGCAG<br>TATTTCCGTC  | GTAAGCTCCG<br>CATTCGAGGC  | GAACCACCAC<br>CTTGGTGGTG | AGAAAAAGAC<br>TCTTTTTCTG  | ACCATTTTTTC<br>TGGTAAAAAG |
| 34601 | TCTCAAACAT<br>AGAGTTTGTA  | GTCTGCGGGT<br>CAGACGCCCA  | TTCTGCATAA<br>AAGACGTATT | ACACAAAATA<br>TGTGTTTTAT  | AAATAACAAA<br>TTTATTGTTT  |
| 34651 | AAAACATTTA<br>TTTTGTAAAT  | AACATTAGAA<br>TTGTAATCTT  | GCCTGTCTTA<br>CGGACAGAAT | CAACAGGAAA<br>GTTGTCCTTT  | AACAACCCTT<br>TTGTTGGGAA  |
| 34701 | ATAAGCATAA<br>TATTCGTATT  | GACGGACTAC<br>CTGCCTGATG  | GGCCATGCCG<br>CCGGTACGGC | GCGTGACCGT<br>CGCACTGGCA  | AAAAAACTG<br>TTTTTTTTGAC  |
| 34751 | GTCACCGTGA<br>CAGTGGCACT  | TTAAAAAGCA<br>AATTTTTTCGT | CCACCGACAG<br>GGTGGCTGTC | CTCCTCGGTC<br>GAGGAGCCAG  | ATGTCCGGAG<br>TACAGGCCTC  |
| 34801 | TCATAATGTA<br>AGTATTACAT  | AGACTCGGTA<br>TCTGAGCCAT  | AACACATCAG<br>TTGTGTAGTC | GTTGATTCAC<br>CAACTAAGTG  | ATCGGTCAGT<br>TAGCCAGTCA  |
| 34851 | GCTAAAAAGC<br>CGATTTTTTCG | GACCGAAATA<br>CTGGCTTTAT  | GCCCGGGGGA<br>CGGGCCCCCT | ATACATACCC<br>TATGTATGGG  | GCAGGCGTAG<br>CGTCCGCATC  |
| 34901 | AGACAACATT<br>TCTGTTGTAA  | ACAGCCCCCA<br>TGTCGGGGGT  | TAGGAGGTAT<br>ATCCTCCATA | AACAAAATTA<br>TTGTTTTAAT  | ATAGGAGAGA<br>TATCCTCTCT  |
| 34951 | AAAACACATA<br>TTTTGTGTAT  | AACACCTGAA<br>TTGTGGACTT  | AAACCCTCCT<br>TTTGGGAGGA | GCCTAGGCAA<br>CGGATCCGTT  | AATAGCACCC<br>TTATCGTGGG  |
| 35001 | TCCCGCTCCA<br>AGGGCGAGGT  | GAACAACATA<br>CTTGTTGTAT  | CAGCGCTTCC<br>GTCGCGAAGG | ACAGCGGCAG<br>TGTCGCCGTC  | CCATAACAGT<br>GGTATTGTCA  |
| 35051 | CAGCCTTACC<br>GTCGGAATGG  | AGTAAAAAAG<br>TCATTTTTTC  | AAAACCTATT<br>TTTTGGATAA | AAAAAAACAC<br>TTTTTTTTGTG | CACTCGACAC<br>GTGAGCTGTG  |
| 35101 | GGCACCAGCT<br>CCGTGGTCTGA | CAATCAGTCA<br>GTTAGTCAGT  | CAGTGTAATA<br>GTCACATTTT | AAGGGCCAAG<br>TTCCCGGTTC  | TGCAGAGCGA<br>ACGTCTCGCT  |
| 35151 | GTATATATAG<br>CATATATATC  | GACTAAAAAA<br>CTGATTTTTT  | TGACGTAACG<br>ACTGCATTGC | GTTAAAGTCC<br>CAATTTCAGG  | ACAAAAAACA<br>TGTTTTTTGT  |

FIG. 10A-44

|       |             |             |            |            |            |
|-------|-------------|-------------|------------|------------|------------|
| 35201 | CCCAGAAAAC  | CGCACGCGAA  | CCTACGCCCA | GAAACGAAAG | CCAAAAAACC |
|       | GGGTCTTTTG  | GCGTGCGCTT  | GGATGCGGGT | CTTTGCTTTC | GGTTTTTTTG |
| 35251 | CACAACTTCC  | TCAAATCGTC  | ACTTCCGTTT | TCCCACGTTA | CGTCACTTCC |
|       | GTGTTGAAGG  | AGTTTAGCAG  | TGAAGGCAAA | AGGGTGCAAT | GCAGTGAAGG |
| 35301 | CATTTTAAGA  | AAACTACAAT  | TCCCAACACA | TACAAGTTAC | TCCGCCCTAA |
|       | GTAAAATTCT  | TTTGATGTTA  | AGGGTTGTGT | ATGTTCAATG | AGGCGGGATT |
| 35351 | AACCTACGTC  | ACCCGCCCCG  | TTCCCACGCC | CCGCGCCACG | TCACAAACTC |
|       | TTGGATGCAG  | TGGGCGGGGC  | AAGGGTGCGG | GGCGCGGTGC | AGTGTTTGAG |
| 35401 | CACCCCTCA   | TTATCATATT  | GGCTTCAATC | CAAAATAAGG | TATATTATTG |
|       | GTGGGGGAGT  | AATAGTATAA  | CCGAAGTTAG | GTTTTATTCC | ATATAATAAC |
|       | PacI        |             |            |            |            |
|       | ~~~~~       |             |            |            |            |
| 35451 | ATGATGTTAA  | TTAAGAATTC  | GGATCTGCGA | CGCGAGGCTG | GATGGCCTTC |
|       | TACTACAATT  | AATTCCTAAG  | CCTAGACGCT | GCGCTCCGAC | CTACCGGAAG |
| 35501 | CCCATTATGA  | TTCTTCTCGC  | TTCCGGCGGC | ATCGGGATGC | CCGCGTTGCA |
|       | GGGTAATACT  | AAGAAGAGCG  | AAGGCCGCCG | TAGCCCTACG | GGCGCAACGT |
| 35551 | GGCCATGCTG  | TCCAGGCAGG  | TAGATGACGA | CCATCAGGGA | CAGCTTCAAG |
|       | CCGGTACGAC  | AGGTCCGTCC  | ATCTACTGCT | GGTAGTCCCT | GTCGAAGTTC |
| 35601 | GCCAGCAAAA  | GGCCAGGAAC  | CGTAAAAAGG | CCGCGTTGCT | GGCGTTTTTC |
|       | CGGTTCGTTTT | CCGGTCCTTG  | GCATTTTTTC | GGCGCAACGA | CCGCAAAAAG |
| 35651 | CATAGGCTCC  | GCCCCCTGA   | CGAGCATCAC | AAAAATCGAC | GCTCAAGTCA |
|       | GTATCCGAGG  | CGGGGGGACT  | GCTCGTAGTG | TTTTTAGCTG | CGAGTTCAGT |
| 35701 | GAGGTGGCGA  | AACCCGACAG  | GACTATAAAG | ATACCAGGCG | TTTCCCCCTG |
|       | CTCCACCGCT  | TTGGGCTGTC  | CTGATATTTT | TATGGTCCGC | AAAGGGGGAC |
| 35751 | GAAGCTCCCT  | CGTGCGCTCT  | CCTGTTCCGA | CCCTGCCGCT | TACCGGATAC |
|       | CTTCGAGGGA  | GCACGCGAGA  | GGACAAGGCT | GGGACGGCGA | ATGGCCTATG |
| 35801 | CTGTCCGCCT  | TTCTCCCTTC  | GGGAAGCGTG | GCGCTTTCTC | ATAGCTCACG |
|       | GACAGGCGGA  | AAGAGGGAAG  | CCCTTCGCAC | CGCGAAAGAG | TATCGAGTGC |
| 35851 | CTGTAGGTAT  | CTCAGTTCGG  | TGTAGGTCGT | TCGCTCCAAG | CTGGGCTGTG |
|       | GACATCCATA  | GAGTCAAGCC  | ACATCCAGCA | AGCGAGGTTC | GACCCGACAC |
| 35901 | TGCACGAACC  | CCCCGTTTCAG | CCCGACCGCT | GCGCCTTATC | CGGTAAGTAT |
|       | ACGTGCTTGG  | GGGGCAAGTC  | GGGCTGGCGA | CGCGGAATAG | GCCATTGATA |

FIG. 10A-45

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 35951 | CGTCTTGAGT<br>GCAGAACTCA | CCAACCCGGT<br>GGTTGGGCCA | AAGACACGAC<br>TTCTGTGCTG | TTATCGCCAC<br>AATAGCGGTG | TGGCAGCAGC<br>ACCGTCGTCG |
| 36001 | CACTGGTAAC<br>GTGACCATTG | AGGATTAGCA<br>TCCTAATCGT | GAGCGAGGTA<br>CTCGCTCCAT | TGTAGGCGGT<br>ACATCCGCCA | GCTACAGAGT<br>CGATGTCTCA |
| 36051 | TCTTGAAGTG<br>AGAACTTCAC | GTGGCCTAAC<br>CACCGGATTG | TACGGCTACA<br>ATGCCGATGT | CTAGAAGGAC<br>GATCTTCCTG | AGTATTTGGT<br>TCATAAACCA |
| 36101 | ATCTGCGCTC<br>TAGACGCGAG | TGCTGAAGCC<br>ACGACTTCGG | AGTTACCTTC<br>TCAATGGAAG | GGAAAAAGAG<br>CCTTTTTCTC | TTGGTAGCTC<br>AACCATCGAG |
| 36151 | TTGATCCGGC<br>AACTAGGCCG | AAACAAACCA<br>TTTGTTTGGT | CCGCTGGTAG<br>GGCGACCATC | CGGTGGTTTT<br>GCCACCAAAA | TTTGTTTGCA<br>AAACAAACGT |
| 36201 | AGCAGCAGAT<br>TCGTGCTCTA | TACGCGCAGA<br>ATGCGCGTCT | AAAAAAGGAT<br>TTTTTTCCTA | CTCAAGAAGA<br>GAGTTCTTCT | TCCTTTGATC<br>AGGAAACTAG |
| 36251 | TTTTCTACGG<br>AAAAGATGCC | GGTCTGACGC<br>CCAGACTGCG | TCAGTGGAAC<br>AGTCACCTTG | GAAAACTCAC<br>CTTTTGAGTG | GTTAAGGGAT<br>CAATTCCTTA |
| 36301 | TTTGGTCATG<br>AAACCAGTAC | AGATTATCAA<br>TCTAATAGTT | AAAGGATCTT<br>TTTCCTAGAA | CACCTAGATC<br>GTGGATCTAG | CTTTTAAATC<br>GAAAATTTAG |
| 36351 | AATCTAAAGT<br>TTAGATTTCA | ATATATGAGT<br>TATATACTCA | AAACTTGGTC<br>TTTGAACCAG | TGACAGTTAC<br>ACTGTCAATG | CAATGCTTAA<br>GTTACGAATT |
| 36401 | TCAGTGAGGC<br>AGTCACTCCG | ACCTATCTCA<br>TGGATAGAGT | GCGATCTGTC<br>CGCTAGACAG | TATTTTCGTT<br>ATAAAGCAAG | ATCCATAGTT<br>TAGGTATCAA |
| 36451 | GCCTGACTCC<br>CGGACTGAGG | CCGTCGTGTA<br>GGCAGCACAT | GATAACTACG<br>CTATTGATGC | ATACGGGAGG<br>TATGCCCTCC | GCTTACCATC<br>CGAATGGTAG |
| 36501 | TGGCCCCAGT<br>ACCGGGGTCA | GCTGCAATGA<br>CGACGTTACT | TACCGCGAGA<br>ATGGCGCTCT | CCCACGCTCA<br>GGGTGCGAGT | CCGGCTCCAG<br>GGCCGAGGTC |
| 36551 | ATTTATCAGC<br>TAAATAGTCG | AATAAACCAG<br>TTATTTGGTC | CCAGCCGGAA<br>GGTCGGCCTT | GGGCCGAGCG<br>CCCGGCTCGC | CAGAAGTGGT<br>GTCTTCACCA |
| 36601 | CCTGCAACTT<br>GGACGTTGAA | TATCCGCCTC<br>ATAGGCGGAG | CATCCAGTCT<br>GTAGGTCAGA | ATTAATTGTT<br>TAATTAACAA | GCCGGGAAGC<br>CGGCCCTTCG |
| 36651 | TAGAGTAAGT<br>ATCTCATTCA | AGTTCGCCAG<br>TCAAGCGGTC | TTAATAGTTT<br>AATTATCAAA | GCGCAACGTT<br>CGCGTTGCAA | GTTGCCATTG<br>CAACGGTAAC |
| 36701 | CTACAGGCAT<br>GATGTCCGTA | CGTGGTGTCA<br>GCACCACAGT | CGCTCGTCGT<br>GCGAGCAGCA | TTGGTATGGC<br>AACCATACCG | TTCATTCAGC<br>AAGTAAGTCG |

FIG. 10A-46

|       |                          |                          |                           |                           |                           |
|-------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 36751 | TCCGGTTCCC<br>AGGCCAAGGG | AACGATCAAG<br>TTGCTAGTTC | GCGAGTTACA<br>CGCTCAATGT  | TGATCCCCCA<br>ACTAGGGGGT  | TGTTGTGCAA<br>ACAACACGTT  |
| 36801 | AAAAGCGGTT<br>TTTTCGCCAA | AGCTCCTTCG<br>TCGAGGAAGC | GTCCTCCGAT<br>CAGGAGGCTA  | CGTTGTCAGA<br>GCAACAGTCT  | AGTAAGTTGG<br>TCATTCAACC  |
| 36851 | CCGCAGTGTT<br>GGCGTCACAA | ATCACTCATG<br>TAGTGAGTAC | GTTATGGCAG<br>CAATACCGTC  | CACTGCATAA<br>GTGACGTATT  | TTCTCTTACT<br>AAGAGAATGA  |
| 36901 | GTCATGCCAT<br>CAGTACGGTA | CCGTAAGATG<br>GGCATTCTAC | CTTTTCTGTG<br>GAAAAGACAC  | ACTGGTGAGT<br>TGACCACTCA  | ACTCAACCAA<br>TGAGTTGGTT  |
| 36951 | GTCATTCTGA<br>CAGTAAGACT | GAATAGTGTA<br>CTTATCACAT | TGCGGCGACC<br>ACGCCGCTGG  | GAGTTGCTCT<br>CTCAACGAGA  | TGCCCCGGCGT<br>ACGGGCCGCA |
| 37001 | CAACACGGGA<br>GTTGTGCCCT | TAATACCGCG<br>ATTATGGCGC | CCACATAGCA<br>GGTGTATCGT  | GAACTTTAAA<br>CTTGAAATTT  | AGTGCTCATC<br>TCACGAGTAG  |
| 37051 | ATTGGAAAAC<br>TAACCTTTTG | GTTCTTCGGG<br>CAAGAAGCCC | GCGAAAACCTC<br>CGCTTTTGAG | TCAAGGATCT<br>AGTTCCTAGA  | TACCGCTGTT<br>ATGGCGACAA  |
| 37101 | GAGATCCAGT<br>CTCTAGGTCA | TCGATGTAAC<br>AGCTACATTG | CCACTCGTGC<br>GGTGAGCACG  | ACCCAACCTGA<br>TGGGTTGACT | TCTTCAGCAT<br>AGAAGTCGTA  |
| 37151 | CTTTTACTTT<br>GAAAATGAAA | CACCAGCGTT<br>GTGGTCGCAA | TCTGGGTGAG<br>AGACCCACTC  | CAAAAACAGG<br>GTTTTTGTCC  | AAGGCAAAAT<br>TTCCGTTTTA  |
| 37201 | GCCGCAAAAA<br>CGGCGTTTTT | AGGGAATAAG<br>TCCCTTATTC | GGCGACACGG<br>CCGCTGTGCC  | AAATGTTGAA<br>TTTACAACCT  | TACTCATACT<br>ATGAGTATGA  |
| 37251 | CTTCCTTTTT<br>GAAGGAAAAA | CAATATTATT<br>GTTATAATAA | GAAGCATTTA<br>CTTCGTAAAT  | TCAGGGTTAT<br>AGTCCCAATA  | TGTCTCATGA<br>ACAGAGTACT  |
| 37301 | GCGGATACAT<br>CGCCTATGTA | ATTTGAATGT<br>TAAACTTACA | ATTTAGAAAA<br>TAAATCTTTT  | ATAAACAAAT<br>TATTTGTTTA  | AGGGGTTCG<br>TCCCCAAGGC   |
| 37351 | CGCACATTTT<br>GCGTGTAAG  | CCCGAAAAGT<br>GGGCTTTTCA | GCCACCTGAC<br>CGGTGGACTG  | GTCTAAGAAA<br>CAGATTCTTT  | CCATTATTAT<br>GGTAATAATA  |
| 37401 | CATGACATTA<br>GTACTGTAAT | ACCTATAAAA<br>TGGATATTTT | ATAGGCGTAT<br>TATCCGCATA  | CACGAGGCCC<br>GTGCTCCGGG  | TTTCGTCTTC<br>AAAGCAGAAG  |
| 37451 | AAGAATTGGA<br>TTCTTAACCT | TCCGAATTCT<br>AGGCTTAAGA | TAAT<br>ATTA              |                           |                           |

FIG. 10A-47



|      |             |             |             |            |             |             |
|------|-------------|-------------|-------------|------------|-------------|-------------|
| 1    | catcatcaat  | aatatacctt  | atagatggaa  | tgggtgccaa | atgtaaatga  | ggtgatttta  |
| 61   | aaaagtgtgg  | gccgtgtggg  | gattggctgt  | ggggttaacg | gttaaaaggg  | gggcgcgggc  |
| 121  | cgtgggaaaa  | tgacgtttta  | tgggggtgga  | gtttttttgc | aagttgtcgc  | gggaaatggt  |
| 181  | acgcataaaa  | aggcttcttt  | tctcacggaa  | ctacttagtt | ttcccacggt  | atttaacagg  |
| 241  | aaatgaggta  | gttttgaccg  | gatgcaagt   | aaaattgctg | attttcgcgc  | gaaaactgaa  |
| 301  | tgaggaagt   | tttttctgaa  | taatgtggta  | tttatggcag | ggtggagtat  | ttgttcaggg  |
| 361  | ccaggtagac  | tttgacccat  | tacgtggagg  | tttcgattac | cgtgtttttt  | acctgaattt  |
| 421  | ccgcgtaccg  | tgtaaaagtc  | ttctgttttt  | acgtaggtgt | cagctgatcg  | ctagggattt  |
| 481  | tatacctcag  | ggtttgtgtc  | aagaggccac  | tcttgagtgc | cagcgagaag  | agttttctcc  |
| 541  | tctgcgccgg  | cagtttaata  | ataaaaaaat  | gagagatttg | cgatttctgc  | ctcaggaaat  |
| 601  | aatctctgct  | gagactggaa  | atgaaatatt  | ggagcttggt | gtgcacgccc  | tgatgggaga  |
| 661  | cgatccggag  | ccacctgtgc  | agctttttga  | gcctcctacg | cttcaggaac  | tgtatgattt  |
| 721  | agaggtagag  | ggatcggagg  | attctaata   | ggaagctgtg | aatggctttt  | ttaccgattt  |
| 781  | tatgctttta  | gctgctaatt  | aaggattaga  | attagatccg | cctttggaca  | ctttcaatac  |
| 841  | tccaggggtg  | attgtggaaa  | gcggtacagg  | tgtaaagaaa | ttacctgatt  | tgagttccgt  |
| 901  | ggactgtgat  | ttgcactgct  | atgaagacgg  | gtttcctccg | agtgatgagg  | aggaccatga  |
| 961  | aaaggagcag  | tccatgcaga  | ctgcagcggg  | tgagggagtg | aaggctgcc   | atgttggttt  |
| 1021 | tcagttggat  | tgcccggagc  | ttctggacat  | ggctgtaagt | cttggtgaatt | tcacaggaaa  |
| 1081 | aatactggag  | taaaggaaat  | gttatgttcg  | cttttggtat | atgaaaaccc  | actggccatt  |
| 1141 | tattttcag   | aaagtgtgtt  | taagttaaaa  | tttaaaggaa | tatgctgttt  | ttcacatgta  |
| 1201 | tattgagtgt  | gagttttgtg  | cttcttatta  | taagtcctgt | gtctgatgct  | gatgaatcac  |
| 1261 | catctcctga  | ttctactacc  | tcacctcctg  | atattcaagc | acctgttcct  | gtggacgtgc  |
| 1321 | gcaagcccat  | tcctgtgaag  | cttaagcctg  | ggaaacgtcc | agcagtggag  | aaacttgagg  |
| 1381 | acttgttaca  | gggtggggac  | ggacctttgg  | acttgagtac | acggaaacgt  | ccaagacaat  |
| 1441 | aagtgttcca  | tatccgtggt  | tacttaaggt  | gacgtcaata | tttgtgtgag  | agtgcgaatg  |
| 1501 | aataaaaaata | tgtaactgt   | tcactggttt  | ttattgcttt | ttgggcgggg  | actcaggtat  |
| 1561 | ataagtagaa  | gcagacctgt  | gtgggttagct | cataggagct | ggctttcatc  | catggagggt  |
| 1621 | tgggccattt  | tggaagacct  | taggaagact  | aggcaactgt | tagagagcgc  | ttcggacgga  |
| 1681 | gtctccggtt  | tttgagagatt | ctgggttcgct | agtgaattag | ctagggtagt  | ttttaggata  |
| 1741 | aaacaggact  | ataaacaaga  | atttgaaaa   | ttgttggtag | attgcccagg  | actttttgaa  |
| 1801 | gctcttaatt  | tgggccatca  | ggttcacatt  | aaagaaaaag | ttttatcagt  | tttagacttt  |
| 1861 | tcaaccccag  | gtagaactgc  | tgctgctgtg  | gcttttctta | cttttatatt  | agataaatgg  |
| 1921 | atcccgcaga  | ctcatttcag  | caggggatac  | gttttggtat | tcatagccac  | agcattgtgg  |
| 1981 | agaacatgga  | aggttcgcga  | gatgaggaca  | atcttaggtt | actggccagt  | gcagcctttg  |
| 2041 | ggtgtagcgg  | gaatcctgag  | gcattccacc  | gtcatgccag | cggttctgga  | ggaggaacag  |
| 2101 | caagaggaca  | accgagagc   | cggcctggac  | cctccagtgg | aggaggcga   | aggtcctgact |
| 2161 | tgtctcctga  | actgcaacgg  | gtgcttactg  | gatctacgtc | cactggacgg  | gataggggcg  |
| 2221 | ttaagaggga  | gagggcatcc  | agtggtagct  | atgctagatc | tgagttggct  | ttaagtttaa  |
| 2281 | tgagtcgcag  | acgtcctgaa  | accatttggt  | ggcatgaggt | tcagaaagag  | ggaagggatg  |
| 2341 | aagtttctgt  | attgcaggag  | aaatattcac  | tggaacaggt | gaaaacatgt  | tggttgaggc  |
| 2401 | caagaggatga | ttgggagggt  | gccattaaaa  | attatgcca  | gatagctttg  | aggccttgata |
| 2461 | aacagataaa  | gatcagtaga  | cggattaata  | tcgggaatgc | ttgttacata  | cttggaatg   |
| 2521 | gggctgaggt  | ggtaatagat  | actcaagaca  | agacagttat | tagatgctgc  | atgatggata  |
| 2581 | tgtggcctgg  | agtagtcggt  | atggaagcag  | tcacttttgt | aaatgttaag  | tttaggggag  |
| 2641 | atggttataa  | tggaatagt   | tttatggcca  | ataccaaact | tatattgcat  | ggttgtagct  |
| 2701 | tttttggttt  | caacaatacc  | tgtgtagatg  | cctggggaca | ggttagtgta  | cgggggtgta  |
| 2761 | gtttctatgc  | gtgttggtat  | gccacagctg  | gcagaaccaa | gagtcaattg  | tctctgaaga  |
| 2821 | aatgcataat  | ccaaagatgt  | aacctgggca  | ttctgaatga | aggcgaagca  | agggtccgtc  |
| 2881 | actgcgcttc  | tacagatact  | ggatgtttta  | ttttaattaa | gggaaatgcc  | agcgtaaagc  |
| 2941 | ataacatgat  | ttgtgggtgct | tccgatgaga  | ggccttatca | aatgctcact  | tgtgctgggtg |
| 3001 | ggcattgtaa  | tatgctggct  | actgtgcata  | ttgtttccca | tcaacgcaaa  | aatggcctg   |
| 3061 | tttttgatca  | caatgtgttg  | accaagtgc   | ccatgcattg | aggtgggctg  | agaggaatgt  |
| 3121 | ttatgcctta  | ccagtgtaac  | atgaatcatg  | tgaagtggtt | gttggaacca  | gttgcttttt  |
| 3181 | ccagaatgag  | cctaacagga  | atctttgaca  | tgaacacgca | aatctgggaag | atcctgaggt  |
| 3241 | atgatgatac  | gagatcgagg  | gtgcgcgcac  | gcgaatgcgg | aggcaagcat  | gccagggtcc  |
| 3301 | agccgggtgtg | tgtagatgtg  | accgaagatc  | tcagaccgga | tcatttggtt  | attgcccgc   |
| 3361 | ctggagcaga  | gttcggatcc  | agtggagaag  | aaactgacta | aggtgagtat  | tgggaaaact  |
| 3421 | ttgggggtggg | attttcagat  | ggacagattg  | agtaaaaaat | tgttttttct  | gtcttgcagc  |
| 3481 | tgacatgagt  | ggaaatgctt  | cttttaagg   | gggagtcctc | agcccttacc  | tgacaggcgc  |
| 3541 | tctcccatcc  | tgggcaggag  | ttcgtcagaa  | tgttatggga | tctactgtgg  | atggaagacc  |
| 3601 | cgttcaaccc  | gccaatctct  | caacgctgac  | ctatgctact | ttaagttctt  | cacctttgga  |
| 3661 | cgcagctgca  | gccgctgccc  | cgcctctgt   | cgcgcctaac | actgtgcttg  | gaatgggtta  |

FIG. 11A-1

|      |             |             |             |             |             |             |
|------|-------------|-------------|-------------|-------------|-------------|-------------|
| 3721 | ctatggaagc  | atcgtgggcta | attccacttc  | ctctaataac  | ccttctacac  | tgactcagga  |
| 3781 | caagttactt  | gtccttttgg  | cccagctgga  | ggctttgacc  | caacgtctgg  | gtgaactttc  |
| 3841 | tcagcaggtg  | gccgagttgc  | gagtacaaac  | tgagtctgct  | gtcggcacgg  | caaagtctaa  |
| 3901 | ataaaaaaaaa | ttccagaatc  | aatgaataaa  | taaacgagct  | tgttgttgat  | ttaaaatcaa  |
| 3961 | gtgtttttat  | ttcatttttc  | gcgcacggta  | tgccctggac  | caccgatctc  | gatcattgag  |
| 4021 | aactcgggtg  | atTTTTtcca  | gaatcctata  | gaggtgggat  | tgaatgttta  | gatacatggg  |
| 4081 | cattaggccg  | tctttggggg  | ggagatagct  | ccattgaagg  | gattcatgct  | ccggggtagt  |
| 4141 | gttgtaaata  | acccagtcac  | aacaaggctg  | cagtgcacgg  | tggtgcacaa  | tatcttttag  |
| 4201 | aagtaggctg  | attgccacag  | ataagccctt  | gggtgaggtg  | tttacaaacc  | ggttgagctg  |
| 4261 | ggaggggtgc  | attcgaggtg  | aaattatgtg  | cattttggat  | tggattttta  | agttggcaat  |
| 4321 | attgccgcca  | agatcccgtc  | ttgggttcat  | gttatgaagg  | actaccaaga  | cgggtgatcc  |
| 4381 | ggtacattta  | ggaaatttat  | cgtgcagctt  | ggatggaaaa  | gcgtggaaaa  | atTTggagac  |
| 4441 | acccttgtgt  | cctccgagat  | tttccatgca  | ctcatccatg  | ataatgcaa   | tggggctgtg  |
| 4501 | ggcagcggcg  | cgggcaaaca  | cgttcctggg  | gtctgacaca  | tcatagttat  | gttcctgagt  |
| 4561 | taaatcatca  | taagccattt  | taatgaattt  | ggggcggagc  | gtaccagatt  | gggggatgaa  |
| 4621 | tgttccttcg  | ggccccggag  | catagttccc  | ctcacagatt  | tgcatttccc  | aagctttcag  |
| 4681 | ttctgagggg  | ggaatcatgt  | ccacctgggg  | ggctatgaag  | aacaccgttt  | cgggggctgg  |
| 4741 | ggtgattagt  | tgggatgata  | gcaagtttct  | gagcaattga  | gatttgccac  | atccggtggg  |
| 4801 | gccataaata  | attccgatta  | caggttgacg  | gtggtagttt  | agggaacggc  | aactgccgtc  |
| 4861 | ttctcgaagc  | aaggggggcca | cctcgttcat  | catttccctt  | acatgcata   | tttccgcac   |
| 4921 | caaataccatt | aggaggcgct  | ctcctcctag  | tgatagaagt  | tcttgtagtg  | aggaaaagtt  |
| 4981 | tttcagcggg  | tttagaccgt  | cagccatggg  | cattttggaa  | agagtttgct  | gcaaaagttc  |
| 5041 | tagtctgttc  | cacagtccag  | tgatgtgttc  | tatggcatct  | cgatccagca  | gacctcctcg  |
| 5101 | tttcgcgggg  | ttggacggct  | cctggagtag  | ggatgagac   | gatgggcgtc  | cagcgctgcc  |
| 5161 | aggggttcgt  | ccttccaggg  | tctcagtgtt  | cgagtcaggg  | ttgtttccgt  | cacagtgaag  |
| 5221 | gggtgtgcgc  | ctgcttgggc  | gcttgccagg  | gtgcgcttca  | gactcattct  | gctggtggag  |
| 5281 | aacttctgtc  | gcttggcgcc  | ctgtatgtcg  | gccaaagtag  | agtttaccat  | gagttcgtag  |
| 5341 | ttgagcgctt  | cggctgcgtg  | gcctttggcg  | cggagcttac  | cTTtggaagt  | tttcttgcac  |
| 5401 | accgggcagt  | ataggcattt  | cagcgcatac  | agcttggggc  | caaggaaaaa  | ggattctggg  |
| 5461 | gagtatgcat  | ccgcgcgcga  | ggaggcgcaa  | acagtttcac  | attccaccag  | ccaggttaaa  |
| 5521 | tccggttcat  | tgggttcaaa  | aacaagtttt  | cgcctatatt  | ttttgatcgc  | tttcttacct  |
| 5581 | ttggtctcca  | taagttcgtg  | tctcgttga   | gtgacaaaac  | ggctgtccgt  | atctccgtag  |
| 5641 | actgatttta  | caggcctctt  | ctccagtggg  | gtgcctcggt  | cttcttcgta  | caggaactct  |
| 5701 | gaccactctg  | atacaaaggc  | gcgcgtccag  | gccagcacaa  | aggaggctat  | gtgggagggg  |
| 5761 | tagcgatcgt  | tgtcaaccag  | ggggtccacc  | ttttccaaag  | tatgcaaaac  | catgtcacc   |
| 5821 | tcttcaacat  | ccaggaatgt  | gattggcttg  | taggtgtatt  | tcaggtgacc  | tcgggtcccc  |
| 5881 | gctggggggg  | tataaaaggg  | ggcggttctt  | tgctcttctt  | cactgtcttc  | cggatcgctg  |
| 5941 | tccaggaacg  | tcagctgttg  | gggtaggtat  | tccctctcga  | aggcgggcat  | gacctctgca  |
| 6001 | ctcaggttgt  | cagtttctaa  | gaacgaggag  | gatttgatat  | tgacagtgcc  | ggttgagatg  |
| 6061 | cctttcatga  | ggttttcgtc  | catttggtca  | gaaaacacaa  | tttttttatt  | gtcaagtttg  |
| 6121 | gtggcaaatg  | atccatacag  | ggcgttggat  | aaaagtttgg  | caatggatcg  | catggtttgg  |
| 6181 | ttcttttctt  | tgtccgcgcg  | ctctttggcg  | gcgatgttga  | gttggaacata | ctcgcgtgcc  |
| 6241 | aggcacttcc  | attcggggaa  | gatagttggt  | aattcatctg  | gcacgattct  | cacttgccac  |
| 6301 | cctcgattat  | gcaaggtaat  | taaataccaca | ctgggtggcca | cctcgcctcg  | aagggggttca |
| 6361 | ttggtccaac  | agagcctacc  | tcctttccta  | gaacagaaag  | ggggaagtgg  | gtctagcata  |
| 6421 | agttcatcgg  | gagggtctgc  | atccatggta  | aagattcccc  | gaagtaaatc  | cttatcaaaa  |
| 6481 | tagctgatgg  | gagtggggtc  | atctaaggcc  | atttgccatt  | ctcgagctgc  | cagtgcgcgc  |
| 6541 | tcatatgggt  | taaggggact  | gccccagggc  | atgggatggg  | tgagagcaga  | ggcatacatg  |
| 6601 | ccacagatgt  | catagacgta  | gatgggatcc  | tcaaagatgc  | ctatgtaggt  | tggatagcat  |
| 6661 | cgcccccttc  | tgatacttgc  | tcgcacatag  | tcataatagtt | catgtgatgg  | cgtagcagc   |
| 6721 | cccggaccga  | agttgggtcg  | attgggtttt  | tctgttctgt  | agacgatctg  | gcgaaagatg  |
| 6781 | gcgtgagaat  | tggaagagat  | gggtgggtct  | tgaaaaatgt  | tgaaatgggc  | atgaggtaga  |
| 6841 | cctacagagt  | ctctgacaaa  | gtgggcataa  | gattcttgaa  | gcttggttac  | cagttcggcg  |
| 6901 | gtgacaagta  | cgtctagggc  | gcagtatgca  | agtgtttctt  | gaatgatgtc  | ataacctggg  |
| 6961 | tggtttttct  | tttccacacg  | ttcgcgggtg  | agaaggattt  | cttcgcgatc  | cttcagtagc  |
| 7021 | tcttctagcg  | gaaaccgcgc  | tttgtctgca  | cggtaagatc  | ctagcatgta  | gaactgatta  |
| 7081 | actgccttgt  | aagggcagca  | gcccttctct  | acgggtagag  | agtatgcttg  | agcagctttt  |
| 7141 | cgtagcgaag  | cgtgagtaag  | ggcaaaaggg  | tctctgacca  | tgactttgag  | aaattgggat  |
| 7201 | ttgaagtcga  | tgctcgtcaca | ggctccctgt  | tcacagagtt  | ggaagtctac  | cggtttcttg  |
| 7261 | taggcggggt  | tgggcaaaag  | gaaagtaaca  | tcattgaaga  | gaatcttacc  | ggctctgggc  |
| 7321 | ataaaattgc  | gagtgatgcg  | gaaaggctgt  | ggtaacttcc  | ctcgattgtt  | gatcacctgg  |
| 7381 | gcagctagga  | cgatttctgc  | gaaaccgttg  | atgttgtgtc  | ctacgatgta  | taattctatg  |

FIG. 11A-2

|       |             |             |            |             |             |             |
|-------|-------------|-------------|------------|-------------|-------------|-------------|
| 7441  | aaacgcggcg  | tgcctctgac  | gtgaggtagc | ttactgagct  | catcaaaggt  | taggtctgtg  |
| 7501  | gggtcagata  | aggcgtagtg  | ttcgagagcc | cattcgtgca  | ggtgaggatt  | tgcattgtagg |
| 7561  | aatgatgacc  | aaagatctac  | cgccagtgct | gtttgtaact  | ggtcccgata  | ctgacgaaaa  |
| 7621  | tgcgcggccaa | ttgccatttt  | ttctggagtg | acacagtaga  | aggttctggg  | gtcttgttgc  |
| 7681  | catcgatccc  | acttgagttt  | aatggctaga | tcgtggggcca | tgttgacgag  | acgctcttct  |
| 7741  | cctgagagtt  | tcatgaccag  | catgaaagga | actagttgtt  | tgccaaagga  | tcccatccag  |
| 7801  | gtgtaagttt  | ccacatcgta  | ggtcaggaag | agtctttctg  | tgcgaggatg  | agagccgatc  |
| 7861  | gggaagaact  | ggatttcctg  | ccaccagttg | gaggattggc  | tgttgatgtg  | atggaagtag  |
| 7921  | aagttttctgc | ggcgcgccga  | gcattcgtgt | ttgtgcttgt  | acagacggcc  | gcagtagtcg  |
| 7981  | cagcgttgca  | cgggttgat   | ctcgtgaatg | agctgtacct  | ggcttccctt  | gacgagaaat  |
| 8041  | ttcagtggga  | agccgaggcc  | tggcgattgt | atctcgtgct  | cttctatatt  | cgctgtatcg  |
| 8101  | gcctgttcat  | cttctgtttc  | gatggtggtc | atgctgacga  | gccccgcgg   | gaggcaagtc  |
| 8161  | cagacgtcgg  | cgcgggagg   | gcggagctga | aggacgagag  | cgcgcaggct  | ggagctgtcc  |
| 8221  | agagtcctga  | gacgctgcgg  | actcaggtta | gtaggtaggg  | acagaagatt  | aacttgcattg |
| 8281  | atctttttcca | gggcgtgcgg  | gaggttcaga | tggtaactga  | tttccacagg  | ttcgtttgta  |
| 8341  | gagacgtcaa  | tggcttgacg  | ggttccgtgt | cttttgggcg  | ccactaccgt  | acctttgttt  |
| 8401  | tttcttttga  | tcggtgggtg  | ctctcttgc  | tcttgcatgc  | tcagaagcgg  | tgacggggac  |
| 8461  | gcgcgcggg   | cggcagcgg   | tgttccggac | ccgggggcat  | ggctggtagt  | ggcacgtcgg  |
| 8521  | cgccgcgcac  | gggcagggtc  | tggatttgcg | ctctgagaag  | acttgctg    | gccaccacgc  |
| 8581  | gtcgattgac  | gtcttgtatc  | tgacgtctct | gggtgaaagc  | taccggcccc  | gtgagcttga  |
| 8641  | acctgaaaga  | gagttcaaca  | gaatcaattt | cggtatcggt  | aacggcagct  | tgtctcagta  |
| 8701  | tttcttgtac  | gtcaccagag  | ttgtcctgg  | aggcgatctc  | cgccatgaac  | tgctcgattt  |
| 8761  | cttctctctg  | aagatctccg  | cgaccgcctc | tttcgacgg   | ggccgcgagg  | tcattggaga  |
| 8821  | tacggcccat  | gagttgggag  | aatgcattca | tgcccgcctc  | gttccagacg  | cggctgtaaa  |
| 8881  | ccacggcccc  | ctcggagtct  | cttgccgcga | tcaccacctg  | agcgaggtta  | agctccacgt  |
| 8941  | gtctgggtgaa | gaccgcatag  | ttgcataggg | gctgaaaaag  | gtagttgagt  | gtgggtggcaa |
| 9001  | tgtgttcggc  | gacgaagaaa  | tacatgatcc | atcgtctcag  | cggcatttctg | ctaacatcgc  |
| 9061  | ccagagcttc  | caagcgctcc  | atggcctcgt | agaagtccac  | ggcaaaatta  | aaaaactggg  |
| 9121  | agtttctgcgc | ggacacggtc  | aattcctcct | cgagaagacg  | gatgagttcg  | gctatggtgg  |
| 9181  | cccgtacttc  | gcgttcgaag  | gctcccggga | tctcttcttc  | ctcttctatc  | cttcttcca   |
| 9241  | ctaacatctc  | ttcttctgtct | tcaggcgggg | cgggaggggg  | cacgcggcga  | cgtcgacggc  |
| 9301  | gcacgggcaa  | acggtcgtatg | aatcgttcaa | tgacctctcc  | gcggcgggcg  | cgcattggtt  |
| 9361  | cagtgcgggc  | gcggccgttc  | tcgcgcggtc | gcagagtaaa  | aacaccgcgc  | cgcattctct  |
| 9421  | taaagtgggtg | actgggaggt  | tctccgtttg | ggaggagag   | ggcgctgatt  | atacatttta  |
| 9481  | taaattggcc  | cgtagggact  | gcgcgcagag | atctgatcgt  | gtcaagatcc  | acgggatctg  |
| 9541  | aaaaccttct  | gacgaaagcg  | tctaaccagt | ccagtcaca   | aggtaggctg  | atacgggtct  |
| 9601  | cttgtggggcg | ggggtggtta  | tgtgttcgg  | ctgggtcttc  | tgtttcttct  | tcattctcgg  |
| 9661  | aaggtgagac  | gatgctgctg  | gtgatgaaat | taaagtaggc  | agtttctaaga | cggcggatgg  |
| 9721  | tggcgaggag  | caccaggtct  | ttgggtccgg | cttgctggat  | acgcaggcga  | ttggccattc  |
| 9781  | cccaagcatt  | atcctgacat  | ctagcaagat | ctttgtagta  | gtcttgcattg | agccgttcta  |
| 9841  | cgggcacttc  | ttcctcaccc  | gttctgccat | gcatacgtgt  | gagtcctaat  | ccgcgcattg  |
| 9901  | cttggtaccag | tgccaagtca  | gtctacgact | tttcggcgag  | gatggcttgc  | ctacttggg   |
| 9961  | taagggtggc  | ttgaaagtca  | tcaaaatcca | caaagcgggtg | gtaagccctt  | gtattaatgg  |
| 10021 | tgtgaagcaca | gttggccatg  | actgaccagt | taactgtctg  | gtgaccagg   | cgcacgagct  |
| 10081 | cggtgtattt  | aaggcgcgaa  | taggcgcggg | tgtcaaagat  | gtaatcgttg  | caggtgcgca  |
| 10141 | ccagatactg  | gtaccctata  | agaaaatgcg | gcggtgggtg  | gcggtagaga  | ggccatcggt  |
| 10201 | ctgtagctgg  | agcgccagg   | gcgaggtctt | ccaacataag  | gcggtgatag  | ccgtagatgt  |
| 10261 | acctggacat  | ccaggtgatt  | cctgcggcgg | tagtagaagc  | ccgaggaagc  | tcgcgtacgc  |
| 10321 | ggttccaaat  | gttgcgtagc  | ggcatgaagt | agttcattgt  | aggcacgggt  | tgaccagtga  |
| 10381 | ggcgcgcgca  | gtcattgatg  | ctctatagac | acggagaaaa  | tgaaagcgtt  | cagcgactcg  |
| 10441 | actccgtagc  | ctggagggaac | gtgaacgggt | tgggtcgcgg  | tgtaccccg   | ttcgagactt  |
| 10501 | gtactcgagc  | cggccggagc  | cgcggttaac | gtgggtattg  | cactcccgtc  | tcgaccagc   |
| 10561 | ctacaaaaat  | ccaggatacg  | gaatcgagtc | gttttgcgtg  | tttccgaatg  | gcagggaagt  |
| 10621 | gagtcctatt  | tttttttttt  | ttttgcgct  | cgatgcacg   | ccgtgctcgc  | acagatgcgc  |
| 10681 | ccccaaacaac | agccccctc   | gcagcagcag | cagcagcagc  | aaccacaaaa  | ggctgtccct  |
| 10741 | gcaactactg  | caactgccgc  | cgtgagcgg  | gcgggacagc  | ccgcctatga  | tctggacttg  |
| 10801 | gaagagggcg  | aaggactggc  | acgtctaggt | gcgccttcgc  | ccgagcggca  | tccgcgagtt  |
| 10861 | caactgaaaa  | aagattctcg  | cgaggcgtat | gtgccccaac  | agaacctatt  | tagagacaga  |
| 10921 | agcgggagg   | agccggagga  | gtgcgagct  | tcccgttcta  | acgcgggtcg  | tgagctgcgt  |
| 10981 | cagggtttgg  | accgaagacg  | agtgttgcga | gcagaggatt  | tcgaagtga   | tgaagtgcga  |
| 11041 | gggatcagtc  | ctgccagggc  | acacgtggct | gcagccaacc  | ttgtatcggc  | ttacgagcag  |
| 11101 | acagtaaagg  | aagagcgtaa  | cttccaaaag | tcttttaata  | atcatgtg    | aacctgatt   |

FIG. 11A-3

|       |             |            |             |             |             |             |
|-------|-------------|------------|-------------|-------------|-------------|-------------|
| 11161 | gccccggaag  | aagttaccct | tggtttgatg  | catttggtggg | atttgatgga  | agctatcatt  |
| 11221 | cagaacccta  | ctagcaaacc | tctgaccgcc  | cagctgtttc  | tggtggtgca  | acacagcaga  |
| 11281 | gacaatgagg  | ctttcagaga | ggcgctgctg  | aacatcaccg  | aacccgaggg  | gagatggttg  |
| 11341 | tatgatctta  | tcaacattct | acagagtatc  | atagtgcagg  | agcggagcct  | gggcctggcc  |
| 11401 | gagaaggtag  | ctgccatcaa | ttactcgggt  | ttgagcttgg  | gaaaatatta  | cgctcgcaaa  |
| 11461 | atctacaaga  | ctccatacgt | tcccatagac  | aaggaggtga  | agatagatgg  | gttctacatg  |
| 11521 | cgcacgacgc  | tcaaggtctt | gaccctgagc  | gatgatcttg  | gggtgtatcg  | caatgacaga  |
| 11581 | atgcatcgcg  | cggttagcgc | cagcaggagg  | cgcgagttaa  | gcgacagggg  | actgatgcac  |
| 11641 | agtttgcaaa  | gagctctgac | tggagctgga  | accgaggggtg | agaattactt  | cgacatggga  |
| 11701 | gctgacttgc  | agtggcagcc | tagtcgcagg  | gctctgagcg  | ccgcgacggc  | aggatgtgag  |
| 11761 | cttccttaca  | tagaagaggc | ggatgaaggc  | gaggaggaag  | agggcgagta  | cttggaagac  |
| 11821 | tgatggcaca  | acccgtgttt | tttgctagat  | ggaacagcaa  | gcaccggatc  | ccgcaatgcg  |
| 11881 | ggcggcgctg  | cagagccagc | cgctcggcat  | taactcctcg  | gacgattgga  | cccaggccat  |
| 11941 | ccaacgtatc  | atggcggtta | cgaactcgca  | ccccgaagcc  | tttagacagc  | aacccagggc  |
| 12001 | caaccgtcta  | tcggccatca | tggaaagctgt | agtgccttcc  | cgatctaata  | ccactcatga  |
| 12061 | gaaggtcctg  | gccatcgtga | acgcgttggg  | ggagaacaaa  | gctattcgtc  | cagatgaggc  |
| 12121 | cggactggta  | tacaacgctc | tcttagaacg  | cgtggctcgc  | tacaacagta  | gcaatgtgca  |
| 12181 | aaccaatttg  | gaccgtatga | taacagatgt  | acgcgaagcc  | gtgtctcagc  | gcgaaagggt  |
| 12241 | ccagcgtgat  | gccaacctgg | gttcgctggg  | ggcggttaaat | gctttcttga  | gtactcagcc  |
| 12301 | tgctaattgtg | ccgcgtggtc | aacaggatta  | tactaacttt  | ttaagtgtct  | tgagactgat  |
| 12361 | ggtatcagaa  | gtacctcaga | gcgaagtgtg  | tcagtcgggt  | cctgattact  | tctttcagac  |
| 12421 | tagcagacag  | ggcttgacga | cggtaaatct  | gagccaagct  | tttaaaaacc  | ttaaagggtt  |
| 12481 | gtggggagtg  | catgccccgg | taggagaaaag | agcaaccgtg  | tctagcttgt  | taactccgaa  |
| 12541 | ctcccgctg   | ttattactgt | tggtagctcc  | tttcaccgac  | agcggtagca  | tcgaccgtaa  |
| 12601 | ttcctatttg  | ggttacctac | taaactgtga  | tcgcgaagcc  | atagggcaaa  | cagaggtgga  |
| 12661 | cgagcagacc  | tatcaagaaa | ttacccaagt  | cagtcgcgct  | ttgggacagg  | aagacactgg  |
| 12721 | cagtttgga   | gccactctga | acttcttgct  | taccaatcgg  | tctcaaaaaga | tccctcctca  |
| 12781 | atatgctctt  | actgcgagg  | aggagaggat  | ccttagatat  | gtgcagcaga  | gcgtgggatt  |
| 12841 | gtttctgatg  | caagaggggg | caactccgac  | tgcagcactg  | gacatgacag  | cgcgaaatat  |
| 12901 | ggagcccagc  | atgtatgcca | gtaaccgacc  | tttcattaac  | aaactgctgg  | actacttgca  |
| 12961 | cagagctgccc | gctatgaact | ctgattattt  | acccaatgcc  | atcttaaac   | cgactggct   |
| 13021 | gccccacct   | ggtttctaca | cgggcgaaata | tgacatgccc  | gaccctaata  | acggatttct  |
| 13081 | gtgggacgac  | gtggacagcg | atgttttttc  | acctctttct  | gatcatcgca  | cgtggaaaaa  |
| 13141 | ggaaggcggt  | gatagaatgc | attcttctgc  | atcgctgtcc  | ggggtcatgg  | gtgctaccgc  |
| 13201 | ggctgagccc  | gagtctgcaa | gtccttttcc  | tagtctaccc  | ttttctctac  | acagtgtacg  |
| 13261 | tagcagcgaa  | gtgggtagaa | taagtcgccc  | gagtttaaatg | ggcgaagagg  | agtacctaata |
| 13321 | cgattccttg  | ctcagaccgg | caagagaaaa  | aaatttccca  | aacaatggaa  | tagaaagttt  |
| 13381 | ggtggataaaa | atgagtagat | ggaagactta  | tgctcaggat  | cacagagacg  | agcctgggat  |
| 13441 | catggggact  | acaagtagag | cgagccgtag  | acgccagcgc  | catgacagac  | agaggggtct  |
| 13501 | tgtgtgggac  | gatgaggatt | cggccgatga  | tagcagcgtg  | ttggacttgg  | gtgggagagg  |
| 13561 | aaggggcaac  | ccgtttgctc | atttgcgccc  | tcgcttgggt  | ggtatgttgt  | gaaaaaaaaat |
| 13621 | aaaaaagaaa  | aactcaccaa | ggccattggc  | acgagcgtac  | gttcgtttct  | ctttattatc  |
| 13681 | tgtgtctagt  | ataatgaggc | gagtcgtgct  | aggcggagcg  | gtgggtgtatc | cggagggtcc  |
| 13741 | tctccttcg   | tacgagagcg | tgatgcagca  | gcagcaggcg  | acggcggtga  | tgcaatcccc  |
| 13801 | actggaggct  | ccctttgtgc | ctccgcgata  | cctggcacct  | acggagggca  | gaaacagcat  |
| 13861 | tcgttactcg  | gaactggcac | ctcagtagca  | taccaccagg  | ttgtatctgg  | tggacaacaa  |
| 13921 | gtcggcggac  | attgcttctc | tgaactacta  | gaatgaccac  | agcaacttct  | tgaccacggg  |
| 13981 | ggtgcagaac  | aatgacttta | cccctacgga  | agccagcacc  | cagaccatta  | actttgatga  |
| 14041 | acgatcgcg   | tggggcggtc | agctaaagac  | catcatgcat  | actaacatgc  | caaacgtgaa  |
| 14101 | cgagtatatg  | tttagtaaca | agttcaaagc  | gcgtgtgatg  | gtgtccagaa  | aacctcccga  |
| 14161 | cgggtgctgca | gttggggata | cttatgatca  | caagcaggat  | attttggaat  | atgagtgggt  |
| 14221 | cgagtttact  | ttgccagaag | gcaacttttc  | agttactatg  | actattgatt  | tgatgaacaa  |
| 14281 | tgccatcata  | gataattact | tgaagtggg   | tagacagaat  | ggagtgtctg  | aaagtgcacat |
| 14341 | tgggtgtaag  | ttcgacacca | ggaacttcaa  | gctgggatgg  | gatcccgaag  | caaagttgat  |
| 14401 | catgcctgga  | gtgtatacgt | atgaagcctt  | ccatcctgac  | attgtcttac  | tgcttggtcg  |
| 14461 | cggagtggat  | tttaccgaga | gtcgtttgag  | caaccttctt  | ggtatcagaa  | aaaaacagcc  |
| 14521 | atttcaagag  | ggttttaaga | ttttgtatga  | agatttagaa  | ggtggtaata  | ttccggccct  |
| 14581 | cttggatgta  | gatgcctatg | agaacagtaa  | gaaagaacaa  | aaagccaaaa  | tagaagctgc  |
| 14641 | tacagctgct  | gcagaagcta | aggcaaacat  | agttgccagc  | gactctacaa  | gggttgctaa  |
| 14701 | cgtgggagag  | gtcagaggag | acaattttgc  | gccaacacct  | gttccgactg  | cagaatcatt  |
| 14761 | attggccgat  | gtgtctgatg | gaacggacgt  | gaaactcact  | attcaacctg  | tagaaaaaga  |
| 14821 | tagtaagaat  | agaagctata | atgtgttgga  | agacaaaatc  | aacacagcct  | atcgcagttg  |

FIG. 11A-4

|       |             |             |             |             |            |            |
|-------|-------------|-------------|-------------|-------------|------------|------------|
| 14881 | gtatcttttcg | tacaattatg  | gcgatcccga  | aaaaggagtg  | cgttcctgga | cattgctcac |
| 14941 | cacctcagat  | gtcacctgcg  | gagcagagca  | ggtttactgg  | tcgcttccag | acatgatgaa |
| 15001 | ggatcctgtc  | acttttcgct  | ccactagaca  | agtcagtaac  | taccctgtgg | tgggtgcaga |
| 15061 | gcttatgccc  | gtctttctcaa | agagcttcta  | caacgaacaa  | gctgtgtact | cccagcagct |
| 15121 | ccgccagtcc  | acctcgctta  | cgcacgtctt  | caaccgcttt  | cctgagaacc | agattttaat |
| 15181 | ccgtccgccc  | gcgcccacca  | ttaccaccgt  | cagtgaaaac  | gttcctgctc | tcacagatca |
| 15241 | cgggaccctg  | ccgttgcgca  | gcagtatccg  | gggagtccaa  | cgtgtgaccg | ttactgacgc |
| 15301 | cagacgccgc  | acctgtccct  | acgtgtacaa  | ggcactgggc  | atagtcgcac | cgcgcgtcct |
| 15361 | ttcaagccgc  | acttttctaaa | aaaaaaatgt  | ccattcttat  | ctcgcccagt | aataacaccg |
| 15421 | gttggggctc  | gcgcgctcca  | agcaagatgt  | acggaggcgc  | acgcaaactg | tctacccaac |
| 15481 | atcccgtgcg  | tgttcgcgga  | catttttcgcg | ctccatgggg  | tgccctcaag | ggccgcactc |
| 15541 | gcgttcgaac  | caccgtcgat  | gatgtaatcg  | atcaggtggg  | tgccgacgcc | cgtaattata |
| 15601 | ctcctactgc  | gcctacatct  | actgtggatg  | cagttattga  | cagtgtagt  | gctgacgctc |
| 15661 | gcaactatgc  | tcgacgtaag  | agccggcgaa  | ggcgcatggc  | cagacgccac | cgagctacca |
| 15721 | ctgccatgcg  | agccgcaaga  | gctctgctac  | gaagagctag  | acgcgtgggg | cgaagagcca |
| 15781 | tgcttagggc  | ggccagacgt  | gcagcttcgg  | gcgccagcgc  | cggcaggtcc | cgcaggcaag |
| 15841 | cagccgctgt  | cgcagcggcg  | actattgccc  | acatggccca  | atcgcgaaag | ggcaatgtat |
| 15901 | actgggtgcg  | tgacgctgcc  | accgggtcaac | gtgtaccctg  | gcgcacccgt | ccccctcgca |
| 15961 | cttagaagat  | actgagcagt  | ctccgatgtt  | gtgtcccagc  | ggcgaggatg | tccaagcgca |
| 16021 | aatacaagga  | agaaatgctg  | caggttatcg  | ccactgaagt  | ctacggccaa | ccgttggaag |
| 16081 | atgaaaaaaa  | accccgcmaa  | atcaagcggg  | ttaaaaagga  | caaaaaagaa | gaggaagatg |
| 16141 | gcgatgatgg  | gctggcgagg  | tttgtgcgcg  | agtttgcccc  | acggcgacgc | gtgcaatggc |
| 16201 | gtgggcgcaa  | agttcgacat  | gtgttgagac  | ctggaacttc  | ggtggtcttt | acaccggcg  |
| 16261 | agcgttcaag  | cgctactttt  | aagcgttcct  | atgatgaggt  | gtacggggat | gatgatattc |
| 16321 | ttgagcaggc  | ggctgaccga  | ttaggcgagt  | ttgcttatgg  | caagcgtagt | agaataactt |
| 16381 | ccaaggatga  | gacagtgtca  | atacccttgg  | atcatggaaa  | tcccacccct | agtcctaaac |
| 16441 | cggtcacttt  | gcagcaagt   | ttaccctgta  | ctccgcgaac  | aggtgttaaa | cgcaaggtg  |
| 16501 | aagatttgta  | tcccactatg  | caactgatgg  | tacccaaacg  | ccagaagtgt | gaggacgttt |
| 16561 | tggagaaaag  | aaaagtggat  | ccagatattc  | aacctgaggt  | taaagtgaga | cccattaagc |
| 16621 | aggtgacgcc  | tggtctgggg  | gtacaaactg  | tagacattaa  | gattcccact | gaaagtatgg |
| 16681 | aagtgcacac  | tgaacccgca  | aagcctactg  | ccacctccac  | tgaagtgcac | acggatccat |
| 16741 | ggatgcccat  | gcctattaca  | actgacgcgc  | ccgggtccac  | tcgaagatcc | cgagaaagt  |
| 16801 | acgggtccagc | aagtctgttg  | atgcccaatt  | atgttggtaca | cccatctatt | attcctactc |
| 16861 | ctgggttaccg | aggcactcgc  | tactatcgca  | gccgaaacag  | tacctcccg  | cgtcgccgca |
| 16921 | agacacctgc  | aaatcgcagt  | cgtcgccgta  | gacgcacaag  | caaaccgact | cccggcgccc |
| 16981 | tggtgcggca  | agtgtaccgc  | aatggtagtg  | cggaaccttt  | gacactggcg | cgtgcgcgtt |
| 17041 | accatccgag  | tatcatcact  | taatcaatgt  | tcgcgctgcc  | tccttgccga | tatgtgccct |
| 17101 | acttgctcgcc | ttcgcgttcc  | catcactggg  | taccgaggaa  | gaaactcgcg | ccgtagaaga |
| 17161 | gggatgttgg  | gacgcggaat  | gcgacgctac  | aggcgacggc  | gtgctatccg | caagcaattg |
| 17221 | cgggggtgggt | ttttaccagc  | cttaattcca  | attatcgctg  | ctgcaattgg | cgcgatacca |
| 17281 | ggcatagctt  | ccgtggcggg  | tcaggcctcg  | caacgacatt  | gacattggaa | aaaaaacgta |
| 17341 | taataaaaaa  | aaaatacaat  | ggactctgac  | actcctggtc  | ctgtgactat | gttttcttag |
| 17401 | agatggaaga  | catcaatttt  | tcacctcttg  | ctccgcgaca  | cggcacgaag | cgtacatgg  |
| 17461 | gcacctggag  | cgacatcggc  | acgagccaac  | tgaacggggg  | cgccttcaat | tggagcagta |
| 17521 | tctggagcgg  | gcttaaaaaa  | tttggtccaa  | ccataaaaaa  | atacgggaac | aaagcttgg  |
| 17581 | acagcagtac  | aggacaggcg  | cttagaaata  | aacttaaaga  | ccagaacttc | caacaaaaag |
| 17641 | tagtcgatgg  | gatagcttcc  | ggcatcaatg  | gagtggtaga  | tttggttaac | caggctgtgc |
| 17701 | agaaaaagat  | aaacagtcgt  | ttggaccgcg  | cgccagcaac  | cccaggtgaa | atgcaagtgg |
| 17761 | aggaagaaat  | tcctccgcca  | gaaaaacgag  | gcgacaagcg  | tccgctgcc  | tattggcagg |
| 17821 | agacgttggt  | gacgcgcgta  | gatgaaccgc  | cttcttatga  | ggaagcaacg | aagcttggaa |
| 17881 | tgcccaccac  | tagaccgata  | gccccaatgg  | ccaccggggg  | gatgaaacct | tctcagttgc |
| 17941 | atcgaccctg  | caccttggtg  | ttgccccctc  | cccctgctgc  | tactgctgta | cccgttctta |
| 18001 | agcctgtcgc  | tgccccgaaa  | ccagtcgcgc  | tagccaggtc  | acgtccccgg | ggcgctcctc |
| 18061 | gtccaaatgc  | gcactggcaa  | aatactctga  | acagcatcgt  | gggtctaggc | gtgcaaatgt |
| 18121 | taaaacgcgc  | tcgctgcttt  | taattaaata  | tggagtagcg  | cttaacttgc | ctatctgtgt |
| 18181 | atatgtgtca  | ttacacgcgc  | tcacagcagc  | agaggaaaaa  | aggaagaggt | cgtgcgtcga |
| 18241 | cgctgagtta  | ctttcaagat  | ggccacccca  | tcgatgctgc  | cccaatgggc | atacatgcac |
| 18301 | atcgccggac  | aggatgcttc  | ggagtacctg  | agtccgggtc  | tggtgcagtt | cgccccgcgc |
| 18361 | acttcaacct  | acagacacct  | gggaaataag  | tttagaaatc  | ccaccgtagc | gcccagccac |
| 18421 | gatgtgacca  | ccgaccgtag  | ccagcggctc  | atgttgcgct  | tcgtgcccgt | tgaccgggag |
| 18481 | gacaatacat  | actcttacaa  | agtgcggtac  | accctggccg  | tgggcgacaa | cagagtgtcg |
| 18541 | gatatggcca  | gcacgttctt  | tgacattagg  | ggcgtgttgg  | acagaggtcc | cagtttcaaa |

FIG. 11A-5

|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 18601 | ccctattctg  | gtacggctta  | caactctctg  | gctcctaaag  | gcgctccaaa  | tgcattctcaa |
| 18661 | tggattgcaa  | aaggcgtacc  | aactgcagca  | gccgcaggca  | atgggtgaaga | agaacatgaa  |
| 18721 | acagaggaga  | aaactgctac  | ttacactttt  | gccaatgctc  | ctgtaaaagc  | cgaggctcaa  |
| 18781 | attacaaaag  | agggcttacc  | aataggtttg  | gagatttcag  | ctgaaaacga  | atctaaaccc  |
| 18841 | atctatgcag  | ataaacttta  | tcagccagaa  | cctcaagtgg  | gagatgaaac  | ttggactgac  |
| 18901 | ctagacggaa  | aaaccgaaga  | gtatggaggg  | agggctctaa  | agcctactac  | taacatgaaa  |
| 18961 | ccctgttacg  | ggtcctatgc  | gaagcctact  | aatttaaaag  | gtggtcaggc  | aaaaccgaaa  |
| 19021 | aactcggaac  | cgtcagtgga  | aaaaattgaa  | tatgatattg  | acatggaatt  | ttttgataac  |
| 19081 | tcatcgcaaa  | gaacaaactt  | cagtctctaa  | attgtcatgt  | atgcagaaaa  | tgtagggtttg |
| 19141 | gaaacgccag  | acactcatgt  | agtgtacaaa  | cctggaacag  | aagacacaag  | ttccgaagct  |
| 19201 | aatttgggac  | aacagtctat  | gcccacacaga | cccaactaca  | ttggcttcag  | agataacttt  |
| 19261 | attggactca  | tgtactataa  | cagtactggg  | aacatggggg  | tgctggctgg  | tcaagcgtct  |
| 19321 | cagttaaaatg | cagtgggtga  | cttgcaggac  | tgaaacacag  | aactttctta  | tgctactcttg |
| 19381 | cttgactctc  | tgggcgacag  | aaccagatgc  | tttagcatgt  | ggaatcaggc  | tgtggacagt  |
| 19441 | tatgatcctg  | atgtacgtgt  | tattgaaaat  | catgggtgtg  | aagatgaact  | tcccaactat  |
| 19501 | tgttttccac  | tggacggcat  | aggtgttcca  | acaaccagtt  | acaaatcaat  | agttccaaat  |
| 19561 | ggagaagata  | ataataattg  | gaaagaacct  | gaagtaaagt  | gaacaagtga  | gatcggacag  |
| 19621 | ggtaattttg  | ttgccatgga  | aattaacctt  | caagccaatc  | tatggcgaag  | tttcttttat  |
| 19681 | tccaatgtgg  | ctctgtatct  | cccagactcg  | tacaaataca  | ccccgtccaa  | tgctactctt  |
| 19741 | ccagaaaaca  | aaaacaccta  | cgactacatg  | aacggggcggg | tgggtgccgcc | atctctagta  |
| 19801 | gacacctatg  | tgaacattgg  | tgccagggtg  | tctctggatg  | ccatggacaa  | tgtcaaccca  |
| 19861 | ttcaaccacc  | accgtaacgc  | tggcttgctg  | taccgatcta  | tgcttctggg  | taacggacgt  |
| 19921 | tatgtgcctt  | tccacatata  | agtgcctcaa  | aaattcttcg  | ctgttaaaaa  | cctgctgctt  |
| 19981 | ctcccaggct  | cctacactta  | tgagtggaa   | tttaggaagg  | atgtgaacat  | ggttctacag  |
| 20041 | agttccctcg  | gtaacgacct  | gcgggtagat  | ggcgccagca  | tcagtttcac  | gagcatcaac  |
| 20101 | ctctatgcta  | cttttttccc  | catgggtcac  | aacaccgctt  | ccacccttga  | agccatgctg  |
| 20161 | cggaatgaca  | ccaatgatca  | gtcattcaac  | gactacctat  | ctgcagctaa  | catgctctac  |
| 20221 | cccattcctg  | ccaatgcaac  | caatattccc  | atttccattc  | cttctcgcaa  | ctgggctggc  |
| 20281 | ttcagaggct  | ggtcattttac | cagactgaaa  | accaaagaaa  | ctccctcttt  | ggggtctgga  |
| 20341 | tttgaccctt  | actttgtcta  | ttctggttct  | attccctacc  | tggatgggat  | cttctacctg  |
| 20401 | aaccacactt  | ttaagaagg   | ttccatcatg  | tttgactctt  | cagtgaagctg | gcctggaaat  |
| 20461 | gacagggttac | tatctcctaa  | cgaatttgaa  | ataaagcgca  | ctgtggatgg  | cgaaggctac  |
| 20521 | aacgtagccc  | aatgcaacat  | gaccaaaagac | tgggttcttg  | tacagatgct  | cgccaactac  |
| 20581 | aacatcggtt  | atcagggtct  | ctacattcca  | gaaggatata  | aagatcgcat  | gtattcattt  |
| 20641 | ttcagaaact  | tccagcccat  | gagcaggcac  | gtgggtgatg  | aggtcaatta  | caaagacttc  |
| 20701 | aaggccgtcg  | ccatacccta  | ccaacacaac  | aactctggct  | ttgtgggtta  | ctgggtccg   |
| 20761 | accatgcgcc  | aagggtcaacc | ctatcccgtt  | aactatccct  | atccactcat  | tggaaacact  |
| 20821 | gccgtaaata  | gtgttacgca  | gaaaaagttc  | ttgtgtgaca  | gaacctatgt  | gcgcataacc  |
| 20881 | ttctcgagca  | acttcatgtc  | tatggggggc  | cttacagact  | tgggacagaa  | tatgctctat  |
| 20941 | gccaaactcag | ctcatgctct  | ggacatgacc  | tttgagggtg  | atcccatgga  | tgagccacc   |
| 21001 | ctgctttatc  | ttctcttcga  | agtttttcgac | gtgggtcagag | tgcattcagc  | acaccgctgg  |
| 21061 | atcatcgagg  | cagttctac   | gcgtacaccg  | ttctcgccg   | gtaacgctac  | cacgtaagaa  |
| 21121 | gcttcttgct  | tcttgcaaat  | agcagctgca  | accatggcct  | gcggatccca  | aaacggctcc  |
| 21181 | agcgagcaag  | agctcagagc  | cattgtccaa  | gacctgggtt  | gcggacccta  | ttttttggga  |
| 21241 | acctacgata  | agcgcttccc  | gggggttcag  | gcccccgata  | agctcgcttg  | tgccattgta  |
| 21301 | aatacggccg  | gacgtgagac  | ggggggagag  | cactgggttg  | ctttcggttg  | gaaccacagt  |
| 21361 | tctaacacct  | gctacctttt  | tgatctcttt  | ggattctcgg  | atgatcgtct  | caaacagatt  |
| 21421 | taccagtttg  | aatatgaggg  | tctcctgcgc  | cgcagcgctc  | ttgctaccaa  | ggaccgctgt  |
| 21481 | attacgctgg  | aaaaatctac  | ccagaccgtg  | caggggcccc  | gttctgcgcg  | ctgcggactt  |
| 21541 | ttctgctgca  | tgttccttca  | cgcctttgtg  | cactggcctg  | accgtcccat  | ggacggaaac  |
| 21601 | cccaccatga  | aattgctaac  | tggagtgcc   | aacaacatgc  | ttcattctcc  | taaagtccag  |
| 21661 | cccaccctgt  | gtgacaatca  | aaaagcactc  | taccattttc  | ttaataccca  | ttcgcttat   |
| 21721 | tttcgctctc  | atcgtaaca   | catcgaaagg  | gccactgcgt  | tcgaccgtat  | ggatgttcaa  |
| 21781 | taatgactca  | tgtaaacaac  | gtgttcaata  | aacatcactt  | tattttttta  | catgtatcaa  |
| 21841 | ggctctggat  | tacttattta  | tttacaagtc  | gaatgggttc  | tgacgagaat  | cagaatgacc  |
| 21901 | cgcaggcagt  | gatacgttgc  | ggaactgata  | cttgggttgc  | cacttgaatt  | cggaatcac   |
| 21961 | caacttggga  | accggtatat  | cgggcaggat  | gtcactccac  | agctttctgg  | tcagctgcaa  |
| 22021 | agctccaagc  | aggtcaggag  | ccgaaatctt  | gaaatcacia  | ttaggaccag  | tgctctgagc  |
| 22081 | cgcagagttg  | cggtaacacc  | gattgcagca  | ctgaaacacc  | atcagcgagc  | gatgtctcac  |
| 22141 | gcttgccagc  | acgggtggat  | ctgcaatcat  | gcccacatcc  | agatcttcag  | cattggcaat  |
| 22201 | gctgaacggg  | gtcatcttgc  | aggtctgcct  | acccatggcg  | ggcaccctaat | taggcttgtg  |
| 22261 | ggtgcaatcg  | cagtgcaggg  | ggatcagtat  | catcttggcc  | tgatcctgtc  | tgattcctgg  |

FIG. 11A-6

|       |            |             |             |             |             |             |
|-------|------------|-------------|-------------|-------------|-------------|-------------|
| 22321 | atacacgggt | ctcatgaaag  | catcatattg  | cttgaaagcc  | tgctgggctt  | tactaccctc  |
| 22381 | ggtataaaac | atcccgcag   | acctgctcga  | aaactggtta  | gctgcacagc  | cggcatcatt  |
| 22441 | cacacagcag | cgggcgtcat  | tgttggctat  | ttgcaccaca  | cttctgcccc  | agcggttttg  |
| 22501 | ggtgattttg | gttcgctcgg  | gattctcctt  | taaggctcgt  | tgtccgttct  | cgctggccac  |
| 22561 | atccatctcg | ataatctgct  | ccttctgaat  | cataatattg  | ccatgcaggc  | acttcagctt  |
| 22621 | gccctcataa | tcattgcagc  | catgaggcca  | caacgcacag  | cctgtacatt  | cccaattatg  |
| 22681 | gtgggcgata | tgagaaaaag  | aatgtatcat  | tccctgcaga  | aatcttccca  | tcacgtgctt  |
| 22741 | cagtgtcttg | tgactagtga  | aagttaactg  | gatgcctcgg  | tgctcttcgt  | ttacgtactg  |
| 22801 | gtgacagatg | cgcttgattt  | gttcgtgttg  | ctcaggcatt  | agtttaaaac  | aggtttctaag |
| 22861 | ttcgttatcc | agcctgtact  | tctccatcag  | cagacacatc  | acttccatgc  | ctttctccca  |
| 22921 | agcagacacc | aggggcaagc  | taatcggaat  | cttaacagtg  | caggcagcag  | ctccttttagc |
| 22981 | cagagggtca | tcttttagcga | tcttctcaat  | gcttcttttg  | ccatccttct  | caacgatgcg  |
| 23041 | cacgggcggg | tagctgaaac  | ccactgcatac | aagttgcgcc  | tcttctcttt  | cttcttcgct  |
| 23101 | gtcttgactg | atgtcttgca  | tggggatatg  | tttgggtctt  | cttggcttct  | ttttgggggg  |
| 23161 | tatcggagga | ggaggactgt  | cgctccgttc  | cggagacagg  | gaggattgtg  | acgtttcgct  |
| 23221 | caccattacc | aactgactgt  | cggtagaaga  | acctgacccc  | acacggcgac  | aggtgttttt  |
| 23281 | cttcgggggg | agagggtggag | gcgattgcga  | agggtgcggg  | tccgacctgg  | aaggcggatg  |
| 23341 | actggcagaa | ccccttccgc  | gttcgggggtg | gtgctccctg  | tggcgggtcg  | ttactgattt  |
| 23401 | tccttcgcgg | ctggccattg  | tgttctccta  | ggcagagaaa  | caacagacat  | ggaaactcag  |
| 23461 | ccattgctgt | caacatcgcc  | acgagtgcga  | tcacatctcg  | tcctcagcga  | cgaggaaaag  |
| 23521 | gagcagagct | taagcattcc  | accgcccagt  | cctgccacca  | cctctaccct  | agaagataag  |
| 23581 | gaggtcgacg | catctcatga  | catgcagaat  | aaaaaagcga  | aagagtctga  | gacagacatc  |
| 23641 | gagcaagacc | cgggctatgt  | gacaccgggtg | gaacacgagg  | aagagttaa   | acgctttcta  |
| 23701 | gagagagagg | atgaaaactg  | cccaaaacag  | cgagcagata  | actatcacca  | agatgctgga  |
| 23761 | aatagggatc | agaacaccga  | ctacctcata  | gggcttgacg  | gggaagacgc  | gctccttaaa  |
| 23821 | catctagcaa | gacagtcgct  | catagtcaag  | gatgcattat  | tggacagaac  | tgaagtgcct  |
| 23881 | atcagtgtgg | aagagctcag  | ctgcgcctac  | gagcttaacc  | ttttttcacc  | tcgtactccc  |
| 23941 | cccaaacgtc | agccaaacgg  | cacctgcgag  | ccaaatcctc  | gcttaaaactt | ttatccagct  |
| 24001 | tttgctgtgc | cagaagtact  | ggctacctat  | cacatctttt  | ttaaaaatca  | aaaaattcca  |
| 24061 | gtctctgccc | gcgctaactg  | caccgcgcgc  | gatgccttac  | tcaatctggg  | acctggttca  |
| 24121 | cgcttacctg | atatagcttc  | cttggaaagag | gttccaaaga  | tcttcgaggg  | tctgggcaat  |
| 24181 | aatgagactc | gggccgcaaa  | tgctctgcaa  | aaggagagaa  | atggcatgga  | tgagcatcac  |
| 24241 | agcgtttctg | tgggaattgga | aggcgataat  | gccagactcg  | cagtactcaa  | gcgaagcgtc  |
| 24301 | gaggtcacac | acttcgcata  | tcccgtgtgc  | aacctgcccc  | ctaaagtcac  | gacggcggtc  |
| 24361 | atggaccagt | tactcattaa  | gcgcgcaagt  | cccccttcag  | aagacatgca  | tgaccagatg  |
| 24421 | gcctgtgatg | agggtaaacc  | agtgttcagt  | tgatgacagc  | taacccgatg  | gagcggagac  |
| 24481 | gactctcccc | gggattttgga | agagcgtcgc  | aagcttatga  | tggccgtggg  | gctggttacc  |
| 24541 | gtagaactag | agtgtctccg  | acgtttcttt  | accgattcag  | aaaccttgcg  | caaactcgaa  |
| 24601 | gagaatctgc | actacacttt  | tagacacggc  | tttgtgcggc  | aggcatgcaa  | gatattctaac |
| 24661 | gtggaactca | ccaacctggt  | ttcctacatg  | ggtattctgc  | atgagaatcg  | cctaggacaa  |
| 24721 | agcgtgtctg | acagcacctt  | taagggggaa  | gcccgcctg   | attacatccg  | cgattgtgtc  |
| 24781 | tatctctacc | tgtgccacac  | tggtgcaaac  | ggcgtgggtg  | tatgcatcga  | atgttttgaa  |
| 24841 | gaacagaact | tgaaagagct  | tgacaagctc  | ttacagaaat  | ctcttaaggt  | tctgtggaca  |
| 24901 | gggttcgacg | agcgcaccgt  | cgcttccgac  | ctggcagacc  | tcacttctcc  | agagcgtctc  |
| 24961 | agggttactt | tgcgaaaacg  | attgcctgac  | tttatgagcc  | agagcatgct  | taacaatttt  |
| 25021 | cgctctttca | tcctggaacg  | ctccggtatc  | ctgcccgcga  | cctgctgcgc  | actgcctctc  |
| 25081 | gactttgtgc | ctctcaccta  | ccgcgagtgc  | ccccgcgcgc  | tatggagtca  | ctgctacctg  |
| 25141 | ttccgtctgg | ccaactatct  | ctcctaccac  | tcggatgtga  | tcgaggatgt  | gagcggagac  |
| 25201 | ggcttgctgg | agtgccactg  | ccgctgcaat  | ctgtgcacgc  | cccaccgggtc | cctagcttgc  |
| 25261 | aacccccagt | tgatgagcga  | aaccagata   | ataggcacct  | ttgaattgca  | aggccccagc  |
| 25321 | agccaaggcg | atgggtcttc  | tcctgggcaa  | agtttaaaac  | tgaccccggg  | actgtggacc  |
| 25381 | tccgcctact | tgcgcaagtt  | tgctccggaa  | gattaccacc  | cctatgaaat  | caagttctat  |
| 25441 | aggaccaat  | cacagcctcc  | aaaggccgaa  | cttccggctt  | gcgtcatcac  | ccagggggca  |
| 25501 | attctggccc | aattgcaagc  | catccaaaaa  | tcccgccaag  | aatttctact  | gaaaaagggg  |
| 25561 | aaggggggtc | accttgaccc  | ccagaccggc  | gaggaaactca | acacaagggtt | ccctcaggat  |
| 25621 | gtcccaacga | cgagaaaaca  | agaagttgaa  | ggtgcagccg  | ccgccccag   | aagatatgga  |
| 25681 | ggaagattgg | gacagtcagg  | cagaggaggc  | ggaggaggac  | agtctggagg  | acagtctgga  |
| 25741 | ggaagacagt | ttggaggagg  | aaaacgagga  | ggcagaggag  | gtggaagaag  | taaccgccga  |
| 25801 | caaacagttg | tcctcggctg  | cggagacaag  | caacagcgct  | accatctccg  | ctccgagctg  |
| 25861 | aggaaccggg | cggcgtccca  | gcagtagatg  | ggacgagacc  | ggacgcttcc  | cgaacccaac  |
| 25921 | cagcgcttcc | aagaccggta  | agaaggatcg  | gcaggggatac | aagtcctggc  | gggggcataa  |
| 25981 | gaatgccatc | atctcctgct  | tgcatgagtg  | cgggggcaac  | atatacctca  | cgccgcgcta  |

FIG. 11A-7

|       |             |            |             |             |             |             |
|-------|-------------|------------|-------------|-------------|-------------|-------------|
| 26041 | cttgctatctc | caccatgggg | tgaactttcc  | gcgcaatggt  | ttgcattact  | accgtcacct  |
| 26101 | ccacagcccc  | tactatagcc | agcaaatccc  | gacagtctcg  | acagataaag  | acagcggcgg  |
| 26161 | cgacctccaa  | cagaaaacca | gcagcggcag  | ttagaaaata  | cacaacaagt  | gcagcaacag  |
| 26221 | gaggattaaa  | gattacagcc | aacgagccag  | cgcaaaccgg  | agagttaaga  | aatcggatct  |
| 26281 | ttccaaccct  | gtatgccatc | ttccagcaga  | gtcgggggtca | agagcaggaa  | ctgaaaataa  |
| 26341 | aaaaccgatc  | tctgcgttcg | ctcaccagaa  | gttggtttgta | tcacaagagc  | gaagatcaac  |
| 26401 | ttcagcgcac  | tctcgaggac | gccgaggctc  | tcttcaacaa  | gtactgcgcg  | ctgactctta  |
| 26461 | aagagtaggc  | agcgaccgcg | cttattcaaa  | aaaggcggga  | attacatcat  | cctcgacatg  |
| 26521 | agtaaagaaa  | ttcccacgcc | ttacatgtgg  | agttatcaac  | cccaaattggg | attggcagca  |
| 26581 | ggcgccctcc  | aggactactc | caccgcgatg  | aattgggtca  | gcgcccgggcc | ttctatgatt  |
| 26641 | tctcgagtta  | atgatatacg | cgcctaccga  | aaccaaatac  | ttttggaaca  | gtcagctctt  |
| 26701 | accaccacgc  | cccgcacaac | ccttaatccc  | agaaattggc  | ccgcccgcct  | agtgtaccag  |
| 26761 | gaaagtcccc  | ctcccaccac | tgtattactt  | cctcgagacg  | cccaggccga  | agtccaaattg |
| 26821 | actaatgcag  | gtgcgcagtt | agctggcggc  | tccaccctat  | gtcgtcacag  | gcctcggcat  |
| 26881 | aatataaaac  | gcctgatgat | cagaggccga  | ggtatccagc  | tcaacgacga  | gtcggtgagc  |
| 26941 | tctccgcttg  | gtctacgacc | agacggaatc  | tttcagattg  | ccggctgcgg  | gagatcttcc  |
| 27001 | ttcacccttc  | gtcaggctgt | tctgactttg  | gaaagttegt  | cttcgcaacc  | ccgctcgggc  |
| 27061 | ggaatcggga  | ccgttcaatt | tgtagaggag  | tttactccct  | ctgtctactt  | caacccttc   |
| 27121 | tccggtatctc | ctgggcacta | cccgacagag  | ttcataccga  | acttcgacgc  | gattagcgag  |
| 27181 | tcagtggacg  | gtacgattg  | atgtctggtg  | acgcgggtga  | gctatctcgg  | ctgcgacatc  |
| 27241 | tagaccactg  | ccgcgcgttt | cgctgctttg  | cccgggaact  | tattgagttc  | atctacttcg  |
| 27301 | aactccccaa  | ggatcacctt | caaggctcgg  | cccacggagt  | gcggattact  | atcgaaggca  |
| 27361 | aaatagactc  | tcgcctgcaa | cgaattttct  | cccagcggcc  | cgtgctgatc  | gagcgagacc  |
| 27421 | agggaaacac  | cacggtttcc | atctactgca  | tttgtaatca  | ccccggattg  | catgaaagcc  |
| 27481 | tttgctgtct  | tatgtgtact | gagtttaata  | aaaactgaat  | taagactctc  | ctacggactg  |
| 27541 | ccgcttcttc  | aaccgggatt | ttacaaccag  | aagaacaaaa  | cttttcctgt  | cgtccaggac  |
| 27601 | tctgttaact  | tcacctttcc | tactcacaaa  | ctagaagctc  | aacgactaca  | ccgcttttcc  |
| 27661 | agaagcattt  | tccctactaa | tactactttc  | aaaaccggag  | gtgagctcca  | cggctctccct |
| 27721 | acagaaaacc  | cttgggtgga | agcgggcctt  | gtagtactag  | gaattcttgc  | gggtgggctt  |
| 27781 | gtgattattc  | tttgctacct | atacacagag  | tcttctactt  | tctagtgtgt  | ttgtggtat   |
| 27841 | tggtttaaaa  | aatggggccc | atactagtct  | tgcttggttt  | actttcgctt  | ttggaaccgg  |
| 27901 | gttctgccaa  | ttacgatcca | tgtctagact  | ttgaccacga  | aaactgcaca  | cttacttttg  |
| 27961 | caccgcacac  | aagccgcac  | tgtggagtgc  | ttattaagtg  | cggatgggaa  | tgcaggtccg  |
| 28021 | ttgaaattac  | acacaataac | aaaacctgga  | acaataacct  | atccaccaca  | tgggagccag  |
| 28081 | gagttcccga  | gtggtacact | gtctctgtcc  | gaggtccctga | cggttccatc  | cgcattagta  |
| 28141 | acaacacttt  | cattttttct | gaaatgtgcg  | atctggccat  | gttcctgagc  | aaacagtatt  |
| 28201 | ctctatggcc  | tcctagcaag | gacaacatcg  | taacgtttct  | cattgcttat  | tgcttggtgcg |
| 28261 | cttgcccttct | tactgcttta | ctgtgcgtat  | gcatacacct  | gcttgtaacc  | actcgcacac  |
| 28321 | aaaacgccaa  | taacaaagaa | aaaatgcctt  | aacctctttc  | tgtttacaga  | catggcttct  |
| 28381 | cttaccatctc | tcataattgt | cagcattgtc  | actgccgctc  | acggacaaac  | agtcgtctct  |
| 28441 | atcccactag  | gacataatta | cactctcata  | ggacccccaa  | tcacttcaga  | ggctcatctg  |
| 28501 | accaaactgg  | gaagcgttga | ttactttgat  | ataatctgta  | acaaaacaaa  | accaaataa   |
| 28561 | gtaacttgca  | acatacaaaa | tcttacattg  | attaatgtta  | gcaaagttaa  | cagcggttac  |
| 28621 | tattatgggt  | atgacagata | cagtagtcaa  | tatagaaatt  | acttggttcg  | tgttaccacg  |
| 28681 | ttgaaaacca  | cgaaaatgcc | aaatatggca  | aagattcgat  | ccgatgacaa  | ttctctagaa  |
| 28741 | actttttacat | ctcccaccac | acccgacgaa  | aaaaacatcc  | cagattcaat  | gattgcaatt  |
| 28801 | gttgacgcgg  | tggcagtggt | gatggcacta  | ataataatat  | gcattgctttt | atatgcttgt  |
| 28861 | cgctacaaaa  | agtttcttcc | taaaaaacaa  | gatctcctac  | taaggcttaa  | catttaattt  |
| 28921 | cttttttatac | agccatgggt | tccactacca  | cattccttat  | gcttactagt  | ctcgcaactc  |
| 28981 | tgactttctgc | tcgctcacac | ctcactgtaa  | ctataggctc  | aaactgcaca  | ctaaaaggac  |
| 29041 | ctcaagggtgg | tcatgtcttt | tgggtggagaa | tatatgacaa  | tggatgggtt  | acaaaaccat  |
| 29101 | gtgaccaaac  | tggtagattt | ttctgcaacg  | gcagagacct  | aaccattatc  | aacgtgacag  |
| 29161 | caaatgacaa  | aggcttctat | tatggaaccg  | actataaaag  | tagtttagat  | tataacatta  |
| 29221 | ttgtactgcc  | atctaccact | ccagcacccc  | gcacaactac  | tttctctagc  | agcagtgtcg  |
| 29281 | ctaacaatac  | aattttccat | ccaacctttg  | ccgcgctttt  | aaaacgcact  | gtgaataatt  |
| 29341 | ctacaacttc  | acatacaaca | atttccactt  | caacaatcag  | catcatcgct  | gcagtgacaa  |
| 29401 | ttggaatatc  | tattcttggt | tttaccataa  | cctactacgc  | ctgctgctat  | agaaaagaca  |
| 29461 | aacataaagg  | tgatccatta | cttagatttg  | atatttaatt  | tgttcttttt  | ttttatttac  |
| 29521 | agtatgggtga | acaccaatca | tggtagctag  | aaatttcttc  | ttaccatac   | ttcatctgtgc |
| 29581 | ttttaatgtt  | tgcgctactt | tcacagcagt  | agccacagca  | accccagact  | gtataggagc  |
| 29641 | atttgcttcc  | tatgcacttt | ttgcttttgt  | tacttgcatc  | tgcgtagtga  | gcatagtctg  |
| 29701 | cctgggtatt  | aattttttcc | aacttctaga  | ctggatcctt  | gtgcgaattg  | cctacctgcg  |

FIG. 11A-8



|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 29761 | ccaccatccc  | gaataccgca  | acaaaaatat  | cgcggcactt  | cttagactca  | tctaaaacca  |
| 29821 | tgcaggctat  | actaccaata  | tttttgcttc  | tattgcttcc  | ctacgctgtc  | tcaaccccag  |
| 29881 | ctgcctatag  | tactccacca  | gaacacctta  | gaaaatgcaa  | attccaacaa  | ccgtgggtcat |
| 29941 | ttcttgcttg  | ctatcgagaa  | aaatcagaaa  | cccccccaa   | tttaataatg  | attgctggaa  |
| 30001 | taattaatat  | aatctgttgc  | accataatth  | catttttgat  | ataccccta   | tttgattttg  |
| 30061 | gctggaatgc  | tcccaatgca  | catgatcatc  | cacaagaccc  | agaggaacac  | attccccac   |
| 30121 | aaaacatgca  | acatccaata  | gcgctaatag  | attacgaaag  | tgaaccacaa  | ccccactac   |
| 30181 | tccctgctat  | tagttacttc  | aacctaacgc  | gcggagatga  | ctgaaacact  | caccacttc   |
| 30241 | aattccgccc  | aggatctgct  | cgatatggac  | ggccgcgtct  | cagaacaacg  | acttgcccaa  |
| 30301 | ctacgcatcc  | gccagcagca  | ggaacgcgtg  | gccaaagagc  | tcagagatgt  | catccaaatt  |
| 30361 | caccaatgca  | aaaaaggcat  | attctgtttg  | gtaaaacaag  | ccaagatatc  | ctacgagatc  |
| 30421 | accgctactg  | accatcgcc   | ctcttacgaa  | cttggccccc  | aacgacaaaa  | atttacctgc  |
| 30481 | atggtgggaa  | tcaaccccat  | agtttacc    | caacaaagt   | gagatactaa  | gggttgctt   |
| 30541 | cactgtccct  | gcgattccat  | cgatgacacc  | tacacctgc   | tgaagacct   | atgctggcta  |
| 30601 | agagacctgc  | taccaatgaa  | ttaaaaaaa   | atgattaata  | aaaaatcact  | tacttgaaat  |
| 30661 | cagcaataag  | gtctctgttg  | aaatthtctc  | ccagcagcac  | ctcacttccc  | tcttcccaac  |
| 30721 | tctggtattc  | taaaacccgt  | tcagcggcat  | actthtctcca | tactttaaag  | gggatgtcaa  |
| 30781 | atthtagctc  | ctctcctgta  | cccacaatct  | tcagtcttt   | cttcccagat  | gaccaagaga  |
| 30841 | gtccggctca  | gtgactcctt  | caacctgtct  | tacccctatg  | aagatgaaag  | cacttcccaa  |
| 30901 | caccctthta  | taaaacccagg | gtttattthc  | ccaaatggct  | tcacacaaag  | cccagacgga  |
| 30961 | gttcttactt  | taaaatgttt  | aacccacta   | acaaccacag  | gcggatctct  | acagctaaaa  |
| 31021 | gtgggagggg  | gacttacagt  | ggatgacact  | gatggtacct  | tacaagaaaa  | catacgtgct  |
| 31081 | acagcaccca  | ttactaaaaa  | taatcactct  | gtagaactat  | ccattggaag  | tggattagaa  |
| 31141 | actcaaaaca  | ataaactatg  | tgccaaattg  | ggaaatgggt  | taaaatttaa  | caacggtgac  |
| 31201 | atthgtataa  | aggatagtat  | taacacctta  | tggactggaa  | taaacctctc  | accttaactgt |
| 31261 | caaattgtgg  | aaaacactaa  | tacaaatgat  | ggcaaactta  | ctthtagtatt | agtaaaaaat  |
| 31321 | ggagggtctg  | ttaatggcta  | cggtgtctct  | gttgggtgat  | cagacactgt  | gaaccaaattg |
| 31381 | ttcacacaaa  | agacagcaaa  | catccaatta  | agattatatt  | ttgactcttc  | tggaaatcta  |
| 31441 | ttaactgagg  | aatcagactt  | aaaaattcca  | cttaaaaaata | aatcttctac  | agcgaccagt  |
| 31501 | gaaactgtag  | ccagcagcaa  | agcctthtatg | ccaagtacta  | cagcttatcc  | cttcaacacc  |
| 31561 | actactaggg  | atagtgaaaa  | ctacattcat  | ggaatatggt  | actacatgac  | tagttatgat  |
| 31621 | agaagtctat  | ttcccttgaa  | cattthctata | atgctaaaca  | gccgtatgat  | ttcttccaat  |
| 31681 | gttgcttatg  | ccatacaatt  | tgaatggaat  | ctaaatgcaa  | gtgaatctcc  | agaaagcaac  |
| 31741 | atagctacgc  | tgaccacatc  | ccccthtttc  | thttcttaca  | ttacagaaga  | cgacaactaa  |
| 31801 | aataaagtth  | aagtgtthtt  | atthaaaaatc | acaaaattcg  | agtagttatt  | ttgcttccac  |
| 31861 | cttcccattt  | gacagaatac  | accaatctct  | ccccacgcac  | agctthaaac  | atttggtatc  |
| 31921 | cattagagat  | agacattggt  | ttagattcca  | catttccaaac | agtttcagag  | cgagccaatc  |
| 31981 | tggggtcagt  | gatagataaa  | aatccatcgc  | gatagtcttt  | taaagcgctt  | tcacagtcca  |
| 32041 | actgctgcgg  | atgcgactcc  | ggagtthtga  | tcacgggtcat | ctggaagaag  | aacgatggga  |
| 32101 | atcataatcc  | gaaaacggta  | tcggacgatt  | gtgtctcatc  | aaacccacaa  | gcagccgtg   |
| 32161 | tctgcgtcgc  | tccgtgcgac  | tgtgtthtat  | gggatcaggg  | tccacagtht  | cctgaagcat  |
| 32221 | gattthtaata | gcccttaaca  | tcaactthct  | gggtgcgatgc | gcgcagcaac  | cttacttgat  |
| 32281 | ttcactcaaa  | tctthtgcagt | aggtacaaca  | cattattaca  | atattgttht  | ataaaccata  |
| 32341 | attaaaagcg  | ctccagccaa  | aactcatatc  | tgatataatc  | gcccctgcat  | gaccatcata  |
| 32401 | ccaaagttht  | atataaatta  | aatgacgttc  | cctcaaaaac  | acactaccca  | catacatgat  |
| 32461 | ctctthttggc | atgtgcata   | taacaatctg  | tctgtaccat  | ggacaacgtt  | ggttaatcat  |
| 32521 | gcaacccaat  | ataaccttcc  | ggaaccacac  | tgccaacacc  | gctccccag   | ccatgcatgtg |
| 32581 | aagtgaaccc  | tgctgattac  | aatgacaatg  | aagaacccaa  | ttctctcgac  | cgtgaatcac  |
| 32641 | ttgagaatga  | aaaatatcta  | tagtggcaca  | acatagacat  | aaatgcatgc  | atcttctcat  |
| 32701 | aattthttaac | tcctcaggat  | ttagaacat   | atcccaggga  | ataggaagct  | cttgacagac  |
| 32761 | agtaaagctg  | gcagaacaag  | gaagaccacg  | aacacaactt  | acactatgca  | tagtcatagt  |
| 32821 | atcacaatct  | ggcaacagcg  | ggtggtcttc  | agtcatagaa  | gctcgggtth  | cattthctctc |
| 32881 | acaacgtggt  | aactgggtctc | tggtgtgaag  | gtgatgtctg  | gcgcatgatg  | tcgagcgtgc  |
| 32941 | gcgcaacctt  | gtcataatgg  | agttgcttcc  | tgacattctc  | gtattthtga  | tgcacaaacg  |
| 33001 | cgccctggc   | agaacacact  | cttcttccgc  | ttctatctctg | ccgtttagcg  | tgthccgtgt  |
| 33061 | gatagttcaa  | gtacagccac  | actcttaagt  | tggtcaaaag  | aatgctggct  | tcagttgtaa  |
| 33121 | tcaaaactcc  | atcgcatcta  | attgttctga  | ggaaatcatc  | cacggtagca  | tatgcaaatc  |
| 33181 | ccaaccaagc  | aatgcaactg  | gattgcgttt  | caagcaggag  | aggagaggga  | agagacggaa  |
| 33241 | gaaccatgth  | aattthtatt  | ccaaacgatc  | tcgcagtact  | tcaaattgta  | tacgcgcag   |
| 33301 | atggcatctc  | tcgccccac   | tgtgttggtg  | aaaaagcaca  | gctaaatcaa  | aagaaatcgc  |
| 33361 | atthttcaagg | tgctcaacgg  | tggttccaa   | caaagcctcc  | acgcgcacat  | ccaagaacaa  |
| 33421 | aagaatacca  | aaagaaggag  | cattthtctaa | ctctcaatc   | atcatattac  | attctctgac  |

FIG. 11A-9

|       |            |             |            |            |             |             |
|-------|------------|-------------|------------|------------|-------------|-------------|
| 33481 | cattcccaga | taatttttcag | ctttccagcc | ttgaattatt | cgtgtcagtt  | cttgtggtaa  |
| 33541 | atccaatcca | cacattacaa  | acagggtccc | gagggcgccc | tccaccacca  | ttcttaaaca  |
| 33601 | caccctcata | atgacaaaat  | atcttgctcc | tgtgtcacct | gtagcgaatt  | gagaatggca  |
| 33661 | acatcaattg | acatgccctt  | ggctctaagt | tcttctttaa | gttctagtgt  | taaaaactct  |
| 33721 | ctcatattat | caccaaactg  | cttagccaga | agccccccg  | gaacaagagc  | aggggacgct  |
| 33781 | acagtgcagt | acaagcgcag  | acctcccca  | ttggctccag | caaaaaacaag | attggaataa  |
| 33841 | gcatattggg | aaccaccagt  | aatatcatcg | aagttgctgg | aaatataatc  | aggcagagtt  |
| 33901 | tcttgtagaa | attgaataaa  | agaaaaattt | gccaaaaaaa | cattcaaaac  | ctctgggatg  |
| 33961 | caaatgcaat | aggttaccgc  | gctgcgctcc | aacattgtta | gttttgaatt  | agtctgcaaa  |
| 34021 | aataaaaaaa | aaacaagcgt  | catatcatag | tagcctgacg | aacagggtgga | taaatcagtc  |
| 34081 | tttccatcac | aagacaagcc  | acagggtctc | cagctcgacc | ctcgtaaaac  | ctgtcatcgt  |
| 34141 | gattaaacaa | cagcaccgaa  | agttcctcgc | ggtgaccagc | atgaataagt  | cttgaatgaag |
| 34201 | catacaatcc | agacatgtta  | gcatcagtta | aggagaaaaa | acagccaaca  | tagccttttg  |
| 34261 | gtataattat | gcttaatcgt  | aagtatagca | aagccacccc | tgcgggatac  | aaagtaaaag  |
| 34321 | gcacaggaga | ataaaaaata  | taattatttc | tctgctgctg | tttaggcaac  | gtcgcccccg  |
| 34381 | gtccctctaa | atacacatac  | aaagcctcat | cagccatggc | ttaccagaga  | aagtacagcg  |
| 34441 | ggcacacaaa | ccacaagctc  | taaagtcact | ctccaacctc | tccacaatat  | atatacacia  |
| 34501 | gccctaaact | gacgtaatgg  | gactaaagtg | taaaaaatcc | cgccaaaccc  | aacacacacc  |
| 34561 | ccgaaactgc | gtcaccaggg  | aaaagtacag | tttcaattcc | gcaatcccaa  | caagcgtcac  |
| 34621 | ttcctctttc | tcacggtacg  | tcacatccca | ttaacttaca | acgtcatttt  | cccacggccg  |
| 34681 | cgccgcccct | tttaaccggt  | aaccccacag | ccaatcacca | cacggcccac  | actttttaaa  |
| 34741 | atcacctcat | ttacatattg  | gcaccattcc | atctataagg | tatattattg  | atgatg      |

FIG. 11A-10

| Vaccine<br>T=0, 4 wks                       | Vaccine<br>T=24 wks                         | Monkey<br>ID | Pre  |                  | T=4 wks |     | T=8 wks |     | T=24 wks |     | T=28 wks |     | T=32 wks |     |
|---------------------------------------------|---------------------------------------------|--------------|------|------------------|---------|-----|---------|-----|----------|-----|----------|-----|----------|-----|
|                                             |                                             |              | Mock | Gag <sup>a</sup> | Mock    | Gag | Mock    | Gag | Mock     | Gag | Mock     | Gag | Mock     | Gag |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 11 vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 10 vp | 00D016       | 4    | 6                | 1       | 84  | 5       | 334 | 5        | 99  | 0        | 306 | 3        | 244 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 11 vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 10 vp | 00D044       | 1    | 1                | 8       | 79  | 0       | 374 | 8        | 138 | 0        | 493 | 1        | 253 |
| Ad34ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 11 vp | Ad35ΔE1gagΔE4Ad5Orf6, 10 <sup>4</sup> 10 vp | 00D084       | 4    | 6                | 1       | 125 | 8       | 655 | 6        | 145 | 0        | 351 | 1        | 236 |
| Naïve                                       |                                             | 00D087       | 1    | 1                | 3       | 3   | 8       | 54  | 6        | 8   | 5        | 5   | 3        | 0   |

FIG. 12

| Vaccine (T=0, 4 Wks)                                         | Vaccine (T=24 Wk)                                            | Monkey ID | IFN- $\gamma$ <sup>+</sup> CD4 <sup>+</sup> CD3 <sup>+</sup><br>per 10 <sup>6</sup> Lymphocytes |     | IFN- $\gamma$ <sup>+</sup> CD8 <sup>+</sup> CD3 <sup>+</sup><br>per 10 <sup>6</sup> Lymphocytes |      |
|--------------------------------------------------------------|--------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------|------|
|                                                              |                                                              |           | Mock                                                                                            | Gag | Mock                                                                                            | Gag  |
| Ad34 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^11</sup> vp | Ad35 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^10</sup> vp | 00D016    | 62                                                                                              | 433 | 176                                                                                             | 1288 |
| Ad34 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^11</sup> vp | Ad35 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^10</sup> vp | 00D044    | 136                                                                                             | 593 | 323                                                                                             | 1871 |
| Ad34 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^11</sup> vp | Ad35 $\Delta$ E1gag $\Delta$ E4Ad5Orf6, 10 <sup>^10</sup> vp | 00D064    | 188                                                                                             | 785 | 292                                                                                             | 992  |

FIG. 13